

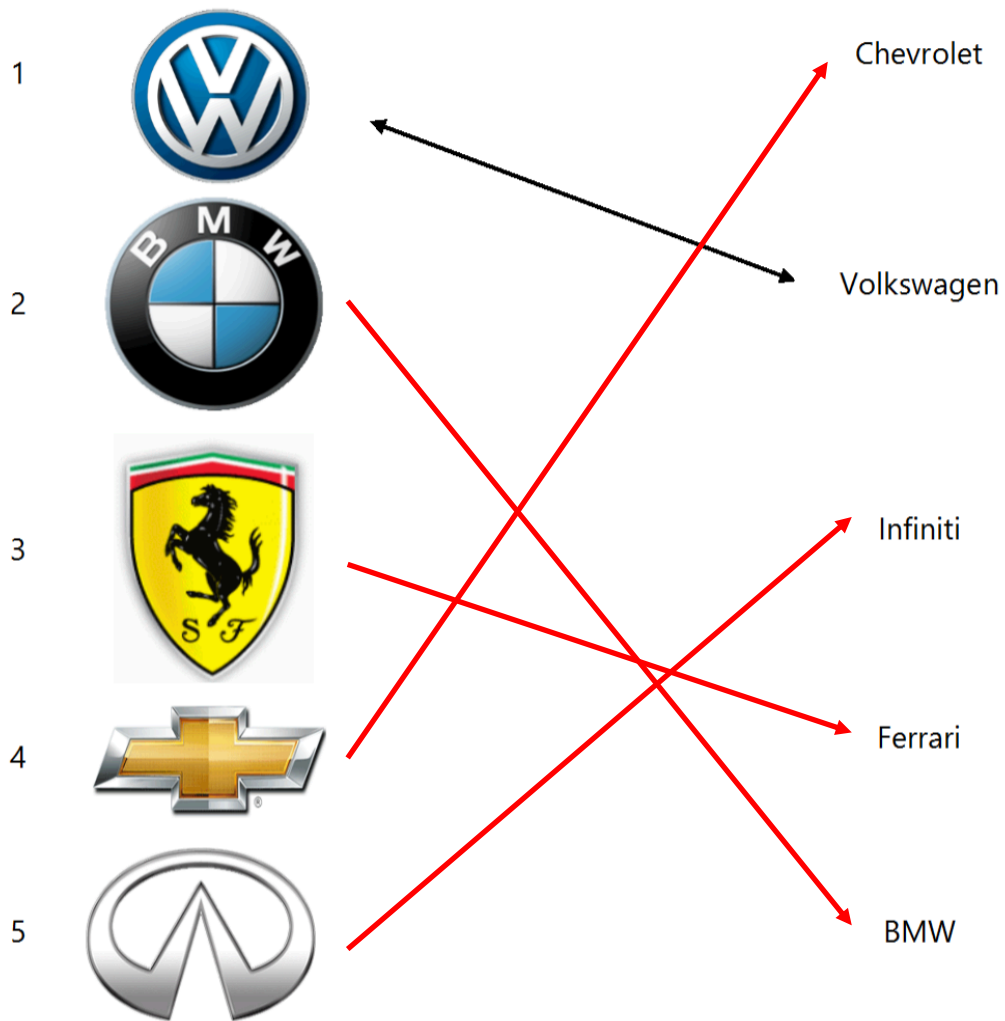
Grade	5	Subject	DT	Lesson number	1	Week number	2
Unit		Date		Time		Page number	
1		WC: 09/09/18		45 minutes		14-21	
Equipment required				Learning objectives			
Grade 5 book Pen Paper				1.1 Understand the <b>Formula Ethara</b> program. 1.2 Identify the qualities of a team.			
Keywords				Formula Ethara			
Time		Starter/Introduction activity					
10 minutes		Introduce students to the Formula Ethara program and talk through Unit 1 overview. Outline the keywords for the unit. Test student knowledge about what they already know about the Formula Ethara program.					
Main							
10 minutes		Explain to students exactly what Formula Ethara is so they are aware of how huge the competition is throughout the country.  Play the Formula Ethara video and talk through the competition.  Explain to students that they will be working in teams to do the project and that they will make a total of 3 cars – 2 race cars and one showcase car. Explain the difference between both cars.					
15 minutes		Talk students through the 5 most important qualities of a team and ask them what they think the most important quality is.					
Plenary							
10 minutes		Complete Activity 1 and go through answers. <i>(answers below)</i>					
Assessment focus		Students will have a good understanding of what the project is about.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					

### *Activity 1 answers –*

There are many **qualities** a good team should have. You should talk in your group, so you can share your **opinion**. As well as talking, it is also important to **listen**. This is because someone else may want to share something. Setting team **goals** helps the team plan what needs to be done. This way, everyone knows what they are doing. It is also very important that everyone does their fair share. It is **unfair** if the work is not shared evenly between the team. It shouldn't be all work and no play. Having **fun** in your team will make the project more **enjoyable**.

Grade	5	Subject	DT	Lesson number	2	Week number	2
Unit		Date		Time		Page number	
1		WC: 9/09/18		45 minutes		22-25	
Equipment required:				Learning objectives			
Grade 5 book pen paper				1.3 Create a team name.			
Keywords				Mercedes, Lamborghini, Ford Mustang, Chevrolet, Volkswagen, Infiniti, Ferrari, BMW			
Time		Starter/Introduction activity					
5 minutes		Talk about team names and why they are important. Get students to discuss in pairs what their favourite company name is and why.					
Main							
10 minutes		Introduce students to different companies and discuss the meaning behind their names and logos.					
5 minutes		Complete Activity 2 by matching company names with their logos. Share answers once complete. <i>(answers below)</i>					
5 minutes		Discuss in pairs and then between the class what impression these logos leave in your mind (Activity 3).					
10 minutes		In teams of three, complete Activity 4 by deciding on a group name. Each student should come up with one name each and write the meaning behind the name.					
Plenary							
10 minutes		Students should pick their chosen group name from the list of names they decided on. They should also discuss why they decided on this name and what the significance and meaning behind the name is.					
Assessment focus		Students will be able to identify companies and their logos. Students will be able to work within their team to decide on a meaningful group name.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					

Activity 2 answers

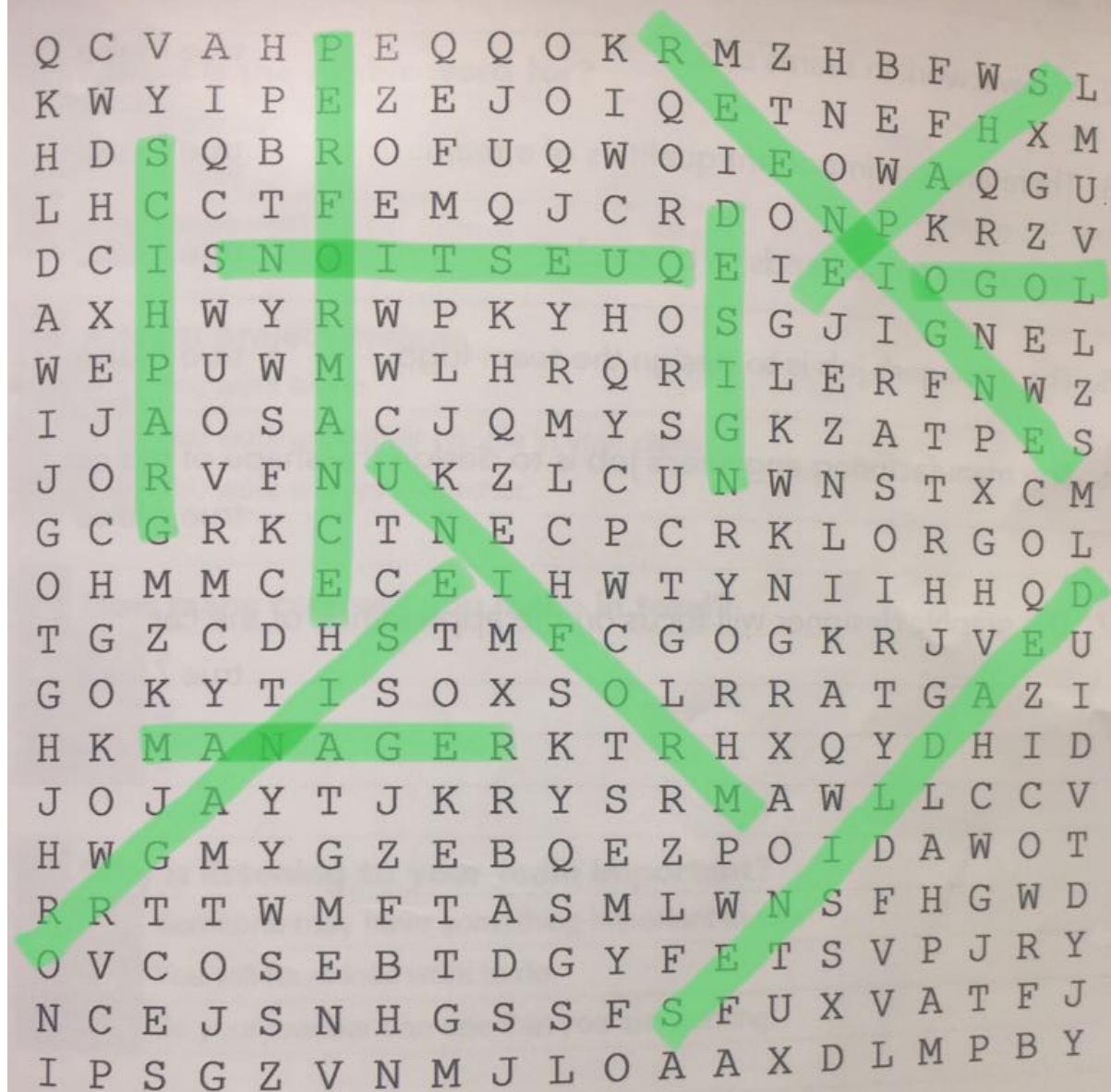




*End of unit quiz answers:*

1. Complete the word search below:

**1. Complete the word search below:**



DEADLINES	DESIGN	ENGINEER	GRAPHICS
LOGO	MANAGER	ORGANISE	PERFORMANCE
QUESTIONS	SHAPE	UNIFORM	

2. Complete the activity below by circling true/false.

1. Ethara is the Arabic word for car. true/false
1. You will work in teams of 3. true/false
2. There are four important qualities of a team. true/false
3. Your team name needs to be catchy. true/false
4. The manager's job is to design the team logo. true/false
5. The manufacturing engineer's job is to design the shape of the car. true/false
6. The graphic designer will focus on the appearance of the car. true/false

*Pop quiz answers:*

- 1 – C
- 2 – B
- 3 – B
- 4 – A
- 5 – B

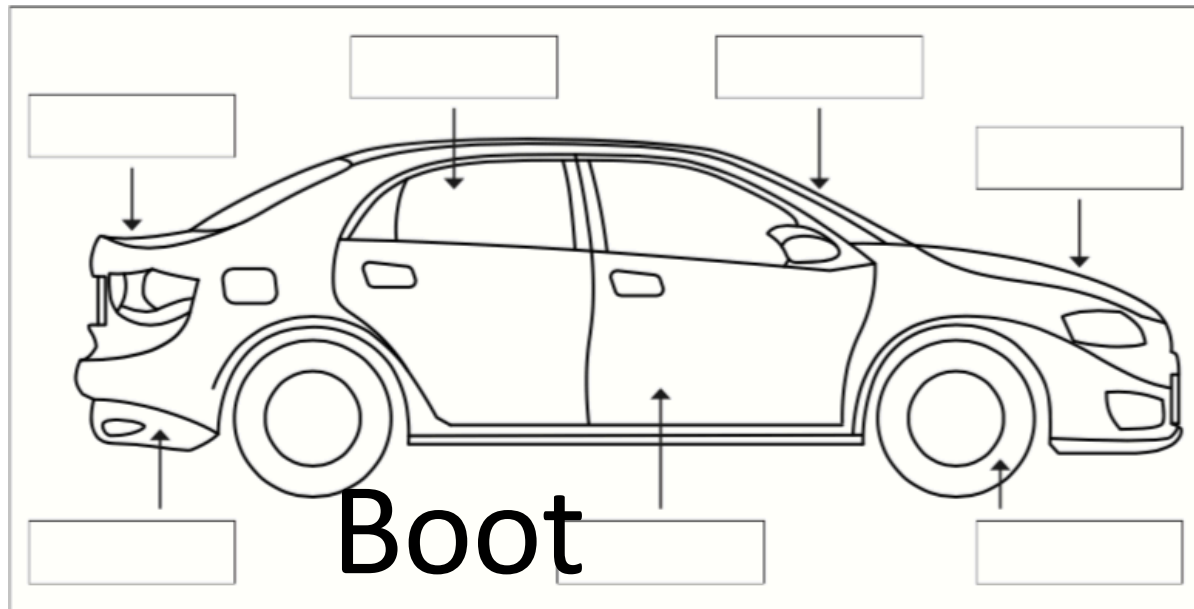
Grade	5	Subject	DT	Lesson number	1	Week number	3
Unit	Date			Time		Page number	
2	WC: 16/09/18			45 minutes		36-42	
Equipment required:				Learning objectives			
Grade 5 book pen paper				2.1 To learn about different types of vehicles 2.2 To learn and identify different types of cars 2.3 To identify the different parts of a car			
Keywords				truck, train, boat, bicycle, plane, Limo, windscreen, boot, bonnet, bumper			
Time		Starter/Introduction Activity					
5 minutes		Talk through the unit overview and learning outcomes; introduce the keywords. Explain to students that there are many different types of vehicles and each of them has their own purpose. Complete the matching Activity 1 on page 38.					
Main							
5 minutes		Talk students through the different types of cars and show them the four variations of cars on page 39. Talk about the differences between them. Ask the class related questions to test their knowledge.					
5 minutes		Students to discuss in pairs what their favourite type of car is from the examples provided on the previous page. Make notes on page 40.					
5 minutes		Have a class discussion and share opinions with each other. Encourage students to back up their opinions with reasoning.					
10 minutes		Watch the YouTube video on page 41 on the different parts of a car. (video link below)					
Plenary							
5 minutes		Complete Activity 2 on page 42. (answers below)					
Assessment focus		Students will distinguish between different types of vehicles and cars and be able to complete Activities 1 and 2.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					



*Video link –*

<https://www.youtube.com/watch?v=z5sORo2v0l0&t=52s>

*Activity 2 answers –*



Grade	5	Subject	DT	Lesson number	2	Week number	3
Unit		Date		Time		Page number	
2		WC: 16/09/18		45 minutes		43-52	
Equipment required:				Learning objectives			
Grade 5 book pen paper				2.4 To build the chassis of the Formula Ethara race car			
Keywords				canister housing, chassis,			
Time		Starter/Introduction activity					
5 minutes		Introduce students to the canister housing and the chassis. Show them your final car and explain how it is made up of two parts that come together.					
Main							
5 minutes		Create inwards and outwards folds to the canister housing as shown on page 44.					
10 minutes		Follow the instructions for building the canister housing, but don't use any glue just yet. Try and build the whole thing just to get an understanding of how it comes together.					
10 minutes		Build the canister housing but with glue this time and leave to dry.					
5 minutes		Create inward folds on the chassis as shown on page 51.					
5 minutes		Complete step 2 and step 3 on pages 51 and 52. The chassis is now ready to build.					
Plenary							
5 minutes		Allow students to see if they can follow the next couple of instructions individually. *Do not use glue yet*					
Assessment focus		Students will successfully complete steps 1-3 of the task sheet and begin step 4.					
Learning curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					



Grade	5	Subject	DT	Lesson number	1	Week number	4
Unit		Date		Time		Page number	
2		WC: 23/09/18		45 minutes		63-70	
Equipment required:				Learning objectives			
Grade 5 book pen paper				2.4 To build the chassis of the Formula Ethara race car			
Keywords				chassis, rear axle, front axle, rotate			
Time		Starter/Introduction activity					
5 minutes		Recap the previous lesson with the students and make sure everyone is at the same stage in the build process.					
Main							
15 minutes		Complete steps 1-5 on pages 63-65 to complete the chassis of the car.					
5 minutes		Tick the boxes to show work steps for the task sheet have been completed on page 67.					
5 minutes		Read through the unit summary.					
Plenary							
10 minutes		Complete end of unit summary on page 70.					
Assessment focus		Students will successfully complete step 5 of the task sheet by attaching the wheels to the chassis. Students will complete the end of unit quiz. (answers below)					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

### *End of unit quiz answers*

There are many types of vehicles, and all vehicles are *designed* differently. A *bicycle* is a small vehicle. It is only designed for one person. A truck, however, is *big* because it carries a lot of stuff. A *hot air balloon* is a very light. It uses heated air. A boat, however, is used in the *sea* as it is designed to be used on water. Sports cars are designed to perform at *high* speeds. *4x4s* can be used on roads just like other cars but are specially designed to be used off-road. A limo is a long car that can hold up to *20* people. It is used mainly for weddings and celebrations. Smart cars are *mini* cars that are designed to carry *2* people.

<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson number</b>	2	<b>Week number</b>	4
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
3		WC: 23/09/18		45 minutes		75-77	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book Pen Paper				3.1 Be able to identify a range of logos.			
<b>Keywords</b>				Coca-Cola, Batman, Pepsi, Nike, Adidas, Apple			
<b>Time</b>		<b>Starter/Introduction activity</b>					
10 minutes		Introduce students to Unit 3 by going over the unit overview. Outline the keywords for the unit. Test student knowledge about what they already know about brand identity and what this means.					
<b>Main</b>							
10 minutes		Talk students through what a logo is and ask them to name a few as a class.					
10 minutes		Ask students to work in pairs to discuss what the most important qualities of a logo are and why.					
10 minutes		Now, get students to share their thoughts with the rest of the class through a class discussion.					
<b>Plenary</b>							
5 minutes		Complete Activity 1 on page 77. <i>(answers below)</i>					
<b>Assessment focus</b>		Students will have a good understanding of the important qualities a logo should have. Be able to complete Activity 1.					
<b>Learning curve</b>		The entire course plus specific instructional videos are available on Learning Curve via this link:					

### *Activity 1 answers*

Picture 1 – Pepsi

Picture 2 – Adidas

Picture 3 – Apple

Picture 4 – Coca-Cola

Picture 5 – Nike

Picture 6 – Batman

Grade	5	Subject	DT	Lesson number	3	Week number	4
Unit	Date			Time		Page number	
3		WC: 23/09/18		45 minutes		78-79	
Equipment required:				Learning objectives			
Grade 5 book pen paper computer				3.1 Demonstrate a team identity/brand using colour selection.			
Keywords				colour theme			
Time		Starter/Introduction activity					
10 minutes		Explain to students the meaning of a colour theme and what it means to have a colour theme that is consistent through logos, posters, advertisements, etc.					
Main							
10 minutes		Talk students through how every brand uses their own unique colour theme and ask students to tell you why this is important through a class discussion.					
10 minutes		Allow students to research brands they know of and identify their colour scheme. Ask students to pick their favourite colour themes.					
10 minutes		Have a class discussion about what was found.					
Plenary							
5 minutes		Complete Activity 2. (answers below)					
Assessment focus		Students will understand what a colour theme is and how brands use colour themes. Completed activity 2.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					



## *Activity 2*

Ihop – *blue and red*

Tim Horton – *red*

Vox - *blue and red*

Home Centre – *green*

Toys R Us - *red, orange, green, blue*

Grade	5	Subject	DT	Lesson Number	1	Week number	5
Unit		Date		Time		Page number	
3		WC: 30/09/18		45 minutes		80-81	
Equipment required				Learning objectives			
Grade 5 book Pen Paper				3.1 Understand what the 5 principles of a good logo design are.			
Keywords				Simple, timeless, memorable, versatile, appropriate			
Time		Starter/Introduction activity					
5 minutes		Explain to students that each brand has its own logo. Introduce students to what the 5 principles of a good logo design are.					
Main							
10 minutes		Talk through the 5 principles of a good logo with the students.					
10 minutes		Ask students to give you examples of each principle, e.g. name a logo that you think is simple and why, etc.					
10 minutes		Ask students to work in pairs and put the principles in order of importance with 5 being the most important and 1 being the least. Feedback to the class.					
Plenary							
5 minutes		Quiz students on what each of the principles are to test their understanding.					
Assessment focus		Students will understand what the 5 principles of a good logo design are.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	2	Week number	5
Unit		Date		Time		Page number	
3		WC: 30/09/18		45 minutes		82	
Equipment required				Learning objectives			
Grade 5 book pen paper				3.2 Design a good logo to promote team identity.			
Keywords				logo			
Time		Starter/Introduction activity					
5 minutes		Recap the previous lesson on what the 5 principles of a good logo design are. Explain to students that they will be designing their own logo for their team and car.					
Main							
10 minutes		Have a group discussion and brainstorm some ideas on a group logo. *Remind students that their logo should be meaningful and that they should be able to justify the meaning behind it.*					
10 minutes		Each member of the team needs to design a logo each based upon their group discussion.					
10 minutes		Describe the importance and meaning behind their logo design.					
Plenary							
10 minutes		Presents individual logo to the rest of the group and decide as a team which of the three logos they want to use for their team/car as well as any changes they wish to make.					
Assessment focus		Students will successfully create three logos and select the best one as a team. Completed Activity 3.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	3	Week number	5
Unit		Date		Time		Page number	
3		WC: 30/09/18		45 minutes		83-84	
Equipment required:				Learning objectives			
Grade 5 book pen paper				3.3 Interpret team identity using a team slogan.			
Keywords				slogan			
Time		Starter/Introduction activity					
5 minutes		Introduce students to the term slogan and briefly describe what it means.					
Main							
10 minutes		Talk students through the three slogans on page 83 and describe what each means and their significance.					
10 minutes		Get students to carry out a group discussion on how they will use their logo to represent their team identity.					
10 minutes		Now students will complete Activity 4 by creating a team slogan within their groups.					
Plenary							
10 minutes		Each team to share their chosen group slogan with the rest of the class and discuss its meaning and purpose.					
Assessment focus		Students will understand what the purpose and meaning behind a slogan. Completed activity 4.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	1	Week number	6
Unit		Date		Time		Page number	
3		WC: 7/10/18		45 minutes		85-87	
Equipment required				Learning objectives			
Grade 5 book Pen Paper				3.4 Design a team uniform to represent team identity.			
Keywords				Uniform, identity, unity, equality			
Time		Starter/Introduction activity					
5 minutes		Explain to students that they'll be creating a team uniform and have a quick discussion on why teams have uniforms (without looking at the book) to test their understanding.					
Main							
10 minutes		Talk students through the 3 reasons on page 85 and test their understanding of each statement.					
10 minutes		Show students the Mercedes example on page 86; logo, slogan and t-shirt design.					
10 minutes		Allow students to work in their teams to complete Activity 5 on Microsoft PowerPoint. Students can use the t-shirt templates on page 87 to sketch their ideas.					
Plenary							
10 minutes		Each team to present their t-shirt design to the rest of the class. Get fellow teams to mention one thing about their peers' design that they like.					
Assessment focus		Students will understand the importance of a uniform and have completed Activity 5.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	2	Week number	6
Unit		Date		Time		Page number	
3		WC: 7/10/18		45 minutes		88-92	
Equipment required				Learning objectives			
Grade 5 book pen paper				3.4 To successfully complete the end of unit quiz and pop quiz.			
Keywords				logo, colour theme, simple, memorable, timeless, versatile, appropriate, slogan, uniform, identity, unity, equality			
Time		Starter/Introduction activity					
10 minutes		Recap the whole of Unit 3 with the students by talking through the end of unit quiz and referring to the work they have created.					
Main							
10 minutes		Students to complete the end of unit quiz.					
10 minutes		Students to complete the word search on page 90.					
Plenary							
10 minutes		Students should end the lesson by completing the short pop quiz on page 91-92.					
Assessment focus		Completed end of unit quiz and pop quiz.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

### *End of unit quiz*

1. What is logo?

*A logo is a symbol that is used to represent a company.*

2. Why do we pick a colour theme to follow?

*So all the designs are consistent /so anything designed by the company can easily be recognised / so the brand is unique / etc.*

3. What are the five main things a good logo should be?

*1. Simple 2. Memorable 3. Timeless 4. Versatile 5. Appropriate*

4. In what year was the Coca-Cola logo designed?

*1885*

5. Why do companies have a slogan?

*Companies use slogans because it is a catchy phrase that is easy to remember so people will know them.*

6. What is Nike's slogan?

*Just do it*

7. Why is it important to have a team uniform?

*A team uniform is important for three reasons:*

- *Identity – it makes you different from other teams; it makes you look unique*
- *Unity – it brings the whole team together. It makes you feel like you are part of a team*
- *Equality – everyone is equal and no team member is more important than the other*

## Word Search answers

Complete the word search below.

J M I A C Q F M P A A P Y E R T D V Q P  
V H E P G D E O B J K E Z T J U G F H P  
M X K R E R K J Q Y P V R A Y I O J X R  
Z I O K C A P B O A Q V P I X D C L W I  
L U E E J N C X P C X C D R A R I F O Z  
N A D V H L V R C D S L T P O N D M D C  
T E X F C N X U B V N H T O G B V T E H  
S L K Y F H B Q K E F X R R N H R L V V  
S L O G A N K K H H V T J P G G P A R U  
V N T Y Z F E J E Z Y I C P O M U N N Q  
J B V R S C S L G M H M W A I X S Q D D  
L Y M E V W B V X M L E H S L W Q D M G  
D Y L N E A M I B E O L X N P V Q K M K  
U V V M R E Z U D Y G E A G U N F B P Q  
P X B O J L Q S J E O S X I H T K N F V  
U R M R O F I N U C N S K S N K P D Z N  
V E R S A T I L E B M T W E Y N Y J I B  
M V M R D F Q S Q D S A I D P A A P R N  
T X M E S Q P Z B J I M P T U E X A W D  
N Q S T O H Z W Y I K Z Q H Y R W A H N

APPROPRIATE	BRAND	COLOUR	DESIGN
IDENTITY	LOGO	MEMORABLE	MERCEDES
SIMPLE	SLOGAN	TIMELESS	UNIFORM
VERSATILE			



*Pop quiz 2 answers*

1. What is a logo?  
*B*
2. Which of the following is important for a good logo?  
*B*
3. In what year was the Coca-Cola logo designed?  
*C*
4. What is Nike's slogan?  
*C*
5. Why do we have a team uniform?  
*A*

<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson number</b>	3	<b>Week number</b>	6
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
4		WC: 7/10/18		45 minutes		97-100	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book Pen Paper				4.1 Understand what makes a good design.			
<b>Keywords</b>				Brand identity, graphic design, relevant, eye-catching			
<b>Time</b>		<b>Starter/Introduction activity</b>					
10 minutes		Explain to students that they have to design an outer covering called ‘the car body’ that will cover the chassis they built in Unit 2. In order to do this, they need to understand what makes a good design. Go over the overview, learning outcomes and keywords.					
<b>Main</b>							
10 minutes		Talk through the examples of a good design on pages 98-99 with the students.					
10 minutes		Give students examples of designs that are eye-catching and ones that aren’t. Get them to select the one that is eye-catching. Do this for the rest of the 5 examples to test their understanding.					
5 minutes		Ask students to discuss, in pairs, what they think is the most important example of a good design from the 5 given. Students share their opinions with the rest of the class.					
<b>Plenary</b>							
10 minutes		Finish off the lesson by completing Activity 1 on page 100.					
<b>Assessment focus</b>		Students will understand what makes a good design and have completed Activity 1.					
<b>Learning Curve</b>		The entire course plus specific instructional videos are available on Learning Curve via this link:					

### *Activity 1 answers*

1. Why should a design get people's attention?

*To get them interested in your car and team, etc.*

2. Some brands are so famous that you know them from their colours alone. Can you name one below?

*McDonald's, IKEA, etc.*

3. What does 'easy on the eye' mean?

*Something that is simple enough to understand, yet a good, clean design/not too busy*

4. Name your favourite brand design and explain what you like about it.

*Student answer*

5. What do you think makes a good design? Explain why.

*Student answer*

### *Activity 2 answers*

Can you name three things that are good about this design?

*Simple design/a few colours used/ easy to read writing/ eye-catching, etc.*

Grade	5	Subject	DT	Lesson number	1	Week number	7
Unit		Date		Time		Page number	
4		WC: 14/10/18		45 minutes		101-102	
Equipment required				Learning objectives			
Grade 5 book pen paper scissors glue car body template (page 101)				4.2 Design the outer appearance of the car using a template.			
Keywords				PowerPoint template			
Time		Starter/Introduction activity					
10 minutes		Introduce students to the Microsoft PowerPoint template on page 101 and explain that this is an example of what they will be creating.					
Main							
20 minutes		Provide the students with a printed version of the car body on page 101 and get the students to assemble the design by cutting and folding. This will help the students to understand how the car body comes together and why some of the writing and pictures are upside down.					
5 minutes		Go through the creations making sure to emphasise the areas that need to be upside down when creating a Microsoft PowerPoint template.					
Plenary							
10 minutes		Look at the example on page 101 and get the students to complete Activity 2 on page 102. Have a class discussion to gain insight into their opinions.					
Assessment focus		Students will understand how the Microsoft template will be used.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson number</b>	2	<b>Week number</b>	7
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
4		WC: 14/10/18		45 minutes		103	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book Pen Paper Computer with PowerPoint template				4.2 Design the outer appearance of the car using a template.			
<b>Keywords</b>				PowerPoint template			
<b>Time</b>		<b>Starter/Introduction activity</b>					
10 minutes		Recap the previous lesson with the students using the example chassis they built on page 101. Explain to students that they will be creating their own during this lesson. Ask students to tell you the most important things they remember from the previous lesson.					
<b>Main</b>							
30 minutes		Allow students time to plan their design on paper.  Use PowerPoint to begin creating the car body design.					
<b>Plenary</b>							
5 minutes		Review the lesson and ask students for feedback on what went well during the lesson and what they need to do to complete their template during the next lesson. Remind students that they only have the next lesson to complete their car body design.					
<b>Assessment focus</b>		Students will complete task sheet and create their Microsoft PowerPoint template.					
<b>Learning Curve</b>		The entire course plus specific instructional videos are available on Learning Curve via this link:					

<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson number</b>	3	<b>Week number</b>	7
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
4		WC: 14/10/18		45 minutes		103	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book pen paper computer with PowerPoint template				4.2 Design the outer appearance of the car using a template.			
<b>Keywords</b>				PowerPoint template			
<b>Time</b>		<b>Starter/Introduction activity</b>					
5 minutes		Recap the previous lesson with the students and have a class discussion about what went well during the last lesson and what did not. Remind students that they only have this lesson to complete their car body design.					
<b>Main</b>							
35 minutes		Continue with the car body design on Microsoft PowerPoint.					
<b>Plenary</b>							
5 minutes		Review each team's car body design and ask students to present their design to the rest of the class. Get students to provide positive feedback to each other.					
<b>Assessment focus</b>		Students will complete the task sheet and create their Microsoft PowerPoint template.					
<b>Learning Curve</b>		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson number</b>	1	<b>Week number</b>	8
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
4		WC: 21/10/18		45 minutes		104-106	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book pen paper CAM machine				4.2 Design the outer appearance of the car using a template.			
<b>Keywords</b>				CAM machine			
<b>Time</b>		<b>Starter/Introduction activity</b>					
5 minutes		Introduce students to the CAM machine. Explain the function on the cutting machine (page 104). Explain how the machine works by detecting the X and Y coordinates.					
<b>Main</b>							
35 minutes		Use the CAM machine to cut out the car body templates for all the groups in the class.					
<b>Plenary</b>							
5 minutes		Allow the students to begin creating folds, as shown on page 106, ready for assembly during the next lesson.					
<b>Assessment focus</b>		Students will cut out their outer template using the cutting machine.					
<b>Learning Curve</b>		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson number</b>	2	<b>Week number</b>	8
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
4		WC: 21/10/18		45 minutes		107-111	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book Pen Paper Scissors Glue				4.2 Design the outer appearance of the car using a template.			
<b>Keywords</b>				Assembly			
<b>Time</b>		<b>Starter/Introduction activity</b>					
10 minutes		Review the previous lesson and make sure all groups have completed Step 1 on page 106 and allow time for everyone to catch up.					
<b>Main</b>							
30 minutes		Complete steps 1-11 from pages 107-111.					
<b>Plenary</b>							
5 minutes		Allow students to review their work and make any adjustments if needed ready to attach the wheels during their next lesson.					
<b>Assessment focus</b>		Students will have completed steps 1-10 of outer shell assembly.					
<b>Learning Curve</b>		The entire course plus specific instructional videos are available on Learning Curve via this link:					



<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson number</b>	3	<b>Week number</b>	8
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
4		WC: 21/10/18		45 minutes		112-115	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book Pen Paper				4.2 Design the outer appearance of the car using a template.			
<b>Keywords</b>				Assembly, showcase box			
<b>Time</b>		<b>Starter/Introduction activity</b>					
15 minutes		Review the previous lesson and make sure all groups have completed Steps 1-11 on pages 106-111 and allow time for everyone to catch up.					
<b>Main</b>							
20 minutes		Work through the assembly of the showcase box as a class.					
<b>Plenary</b>							
5 minutes		Place the completed car in the showcase box. Allow time for students to catch up on any incomplete work.					
5 minutes		Complete work steps for task sheet on page 117.					
<b>Assessment focus</b>		Students will build their showcase box.					
<b>Learning Curve</b>		The entire course plus specific instructional videos are available on Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	1	Week number	9
Unit		Date		Time		Page number	
4		WC: 28/10/18		45 minutes		119-120	
Equipment required				Learning objectives			
Grade 5 book Pen Paper				4.3 Understand the effects of aerodynamics.			
Keywords				Aerodynamics			
Time		Starter/Introduction activity					
10 minutes		Introduce aerodynamics to the students by briefly describing the concept and by showing them the three shapes on the board. Get them to discuss with their partner which shape they think is the most aerodynamic. Feedback to the class.					
Main							
10 minutes		Now explain aerodynamics in more detail using the examples on page 119.					
5 minutes		Show students a range of car shapes and explain why some are more aerodynamic than others.					
5 minutes		Complete the first half of Activity 5 on page 120.					
Plenary							
10 minutes		Ask students a question to finish off the lesson: ‘Imagine you had to make the chassis more aerodynamic. How would you change it?’					
Assessment focus		Students will form a good understanding of aerodynamics and will have completed Activity 5.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					

### *Activity 5 answers*

Imagine you had to make the chassis more aerodynamic. How would you change the shape?

3

2

4

5

1

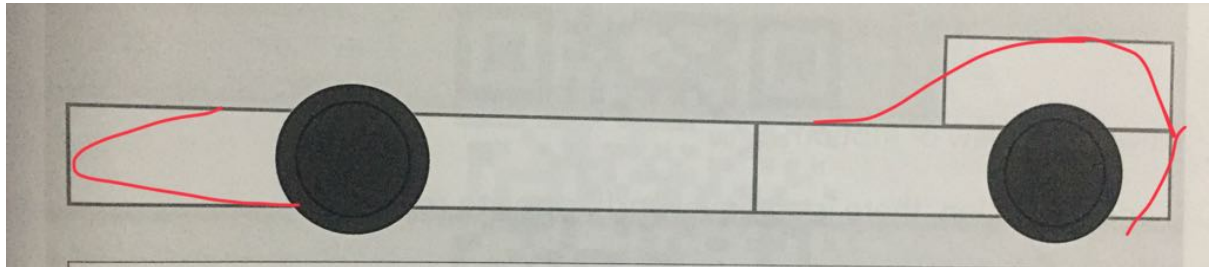
<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson Number</b>	2	<b>Week number</b>	9
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
4		WC: 28/10/18		45 minutes		121-123	
<b>Equipment required</b>				<b>Learning objectives</b>			
Grade 5 book Pen Paper Tape A fishing line A balloon A straw				4.3 Understand the effects of aerodynamics.			
<b>Keywords</b>				Newton's Third Law of Motion			
<b>Time</b>		<b>Starter/Introduction activity</b>					
10 minutes		Start of the lesson by completing the second half of activity 5. Go through the answers with the class and discuss what would makes the car more aerodynamic.					
<b>Main</b>							
10 minutes		Explain to students Newton's Third Law of Motion using the balloon example on page 112 to explain the science.					
20 minutes		Complete Activity 6 on page 123 to further understand Newton's Third Law of Motion.  Explain to students that their car will work in the same way except they will use a gas canister and not a balloon.					
<b>Plenary</b>							
5 minutes		Ask the students to write 3 things that they learnt about Newton's Third Law of Motion and share with the class.					
<b>Assessment focus</b>		Students will have an in-depth understanding of Newton's Third Law of Motion and have completed Activity 6.					
<b>Learning Curve</b>		The entire course plus specific instructional videos are available on Learning Curve via this link:					

### Activity 5 answers (part 2)

Imagine you had to make the chassis more aerodynamic. How would you change the shape?

*Students should attempt to round off the front and back ends of the car and/or add a panel to make the transition from the chassis to the canister housing smoother.*

*Students to attempt something similar to image below:*



*Students should explain that they amended the shape so that air moves more easily over the car just like Image 1 on page 199. They smoothed the transition between the chassis and canister housing to allow air to move more smoothly/to prevent air from gathering. The end is rounded off so that air doesn't gather behind them.*

### Activity 6

YouTube link - <https://www.youtube.com/watch?v=iV3NXFkdUyw>

Grade	5	Subject	DT	Lesson number	3	Week number	9
Unit	Date			Time		Page number	
4		WC: 28/10/18		45 minutes		124-128	
Equipment required				Learning objectives			
Grade 5 book pen paper				4.3 Understand the effects of aerodynamics.			
Keywords				friction, motion			
Time		Starter/Introduction activity					
5 minutes		Recap Newton’s Third Law of Motion with the students and test their knowledge. Explain to students that friction is the opposite of motion.					
Main							
10 minutes		Explain to students (using page 124) that motion will make their car move, but friction will slow it down. Explain the relationship between both concepts.  (In the finals, at Yas Marina Circuit, this information will be tested, so it very important that students have a good grasp of what aerodynamics, motion and friction are.)					
20 minutes		Complete Activity 7 on page 125 to further understand what friction is. Record answers in the table on page 126. Make sure to keep the platform at the same level for each test to make the test as fair as possible.					
Plenary							
10 minutes		Read through the end of unit summary and complete the end of unit quiz.					
Assessment focus		Students will understand the relationship between friction and motion. Completed activity 7 and end of unit quiz.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

### *End of unit quiz*

1. What is aerodynamics?  
*Aerodynamics is the way air moves around things.*
2. Why do you need to think about aerodynamics when you design cars?  
*If you design our cars to be aerodynamic, they can travel faster.*
3. Explain the phrase: 'For every action, there is an equal and opposite reaction.'  
*When a force is applied in one direction, the same force is generated in the opposite direction. For example:*
  - *Rocket – Gas released in one direction makes the rocket shoot forward in the other direction.*
  - *Rowing a boat – Water pushed backwards moves the boat forwards.*
  - *Jumping – Pressure applied to the ground pushes the ground upwards.*
4. Which surfaces create the most amount of friction under the race car?  
*Student answer based upon test results.*
5. Which surfaces create the least amount of friction under the race car?  
*Student answer based upon test results.*

Grade	5	Subject	DT	Lesson Number	1	Week number	10
Unit	Date			Time		Page number	
5	WC: 04/11/18			45 minutes		132-135	
Equipment required				Learning objectives			
Grade 5 book Pen Paper				5.1 Students will gain an understanding into what the competition consists of.			
Keywords				Yas Marina Circuit, gas canister, brewer			
Time		Starter/Introduction activity					
10 minutes		Students will now have built their completed cars, have an in-depth understanding of the project and can focus on the final unit where they race and present their cars.  Talk through the unit overview, learning objectives and keywords with the students.					
Main							
30 minutes		Explain to students how big this competition is and that they will be competing against schools from across the UAE.  Introduce students to the Yas Marina Circuit and show them a video or share some background information on the history behind the circuit, including the F1 races that are held there.  Explain to students that they not only have to race their cars, but there are a few other areas that must be fulfilled to gain a maximum amount of marks. Talk through the 5 areas and explain what each one consists of.					
Plenary							
5 minutes		Quiz the students on what the 5 areas are and what they consist of to test their knowledge.					
Assessment focus		Students will understand how they will gain marks in the project and what is required of them.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					



Grade	5	Subject	DT	Lesson number	2	Week number	10
Unit		Date		Time		Page number	
5		WC: 04/11/18		45 minutes		136-140	
Equipment required				Learning objectives			
Grade 5 book pen paper ruler				5.1 Students will gain an understanding into what the race day consists of and what reaction time is.			
Keywords				reaction time			
Time		Starter/Introduction activity					
5 minutes		Briefly explain to the students what race day will consist of and how each member of the team will race a car. Ask students for suggestions about what they think reaction time is and explain its importance during these races.					
Main							
10 minutes		Show students the video using the link on page 138. Explain what needs to be done when carrying out the experiment and give students a demonstration. Make sure to explain the rules on page 139.					
10 minutes		Once each student has his/her test results, demonstrate how to work out the average and get the students to do this for their own results.					
10 minutes		Now, complete the table on page 140 with the student name, average distance and reaction time.					
Plenary							
10 minutes		Compare class reaction times with the rest of the class. Introduce the class to games and exercises that will improve their reaction time.					
Assessment focus		Students understand how important reaction time is when racing their cars. Students will complete Activity 1.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

### Activity 1

YouTube link - <https://www.youtube.com/watch?v=81lPjtAp5Sc>

Grade	5	Subject	DT	Lesson number	3	Week number	10
Unit	Date			Time		Page number	
5		WC: 04/11/18		45 minutes		141-145	
Equipment required				Learning objectives			
Grade 5 book pen paper				5.1 Students will understand exactly how the race will work.			
Time		Starter/Introduction activity					
5 minutes		Explain to students that they will make a total of three cars, and two will be used for racing while the other one will be the showcase car.					
Main							
10 minutes		Get students to use the pre-race checklist to see if their cars match the criteria on page 141. Teacher fills out the table on page 141.					
5 minutes		Show the students the picture on page 142 so they know exactly how their cars will be set up before they race.					
15 minutes		Talk through the five steps on pages 143-145, so the students are completely aware of how their cars will work on race day. Test students' knowledge by carrying out an activity where the 5 steps are jumbled and they re-order the 5 steps. You can write these on the board and get students to write the answers in their books.					
Plenary							
10 minutes		Get students to answer the 'think about...' question at the bottom of page 145. Discuss the answer as a class.					
Assessment focus		Students carry out pre-race checklist before racing their cars. Students can successfully apply Newton's Third Law of Motion to their cars.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	1	Week number	11
Unit	Date			Time		Page number	
5		WC: 11/11/18		45 minutes		146	
Equipment required				Learning objectives			
Grade 5 book pen paper racing equipment				5.1 Race two cars and record the time it takes			
Time		Starter/Introduction activity					
5 minutes		Teacher to set up the race track while students get their cars ready.					
Main							
30 minutes		Race the cars and record the times it takes for each car to reach the finish line.					
Plenary							
10 minutes		Allow students time to complete the average time using the same formula on page 139.					
Assessment focus		Students will successfully race their cars.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	2	Week number	11
Unit	Date			Time		Page number	
5		WC: 11/11/18		45 minutes		146-147	
Equipment required				Learning objectives			
Grade 5 book pen paper racing equipment				5.1 Race two cars and record the time it takes.			
Time		Starter/Introduction activity					
5 minutes		Review the previous lesson and discuss what went well during the race. Prepare the race track and get the students to get their cars ready.					
Main							
30 minutes		Continue racing the cars and recording the times it takes for each car to reach the finish line.					
Plenary							
10 minutes		Allow students time to complete the average time using the same formula on page 139. Teacher to complete table on page 147.					
Assessment focus		Students will successfully race their cars.					
Learning Curve		The entire course plus specific instructional videos are available on the Learning Curve via this link:					

Grade	5	Subject	DT	Lesson number	3	Week number	11
Unit		Date		Time		Page number	
5		WC: 11/11/18		45 minutes		148-150	
Equipment required				Learning objectives			
Grade 5 book Pen Paper Card Colors Printer Scissors Glue				5.4 Build a showcase box.			
Time		Starter/Introduction activity					
5 minutes		Review the previous lesson and discuss what went well and what didn't go well with the racing. Get students to think about what they would do differently if they were racing in the finals.					
Main							
5 minutes		Show students' previous examples of showcase boxes designed for the Formula Ethara challenge.					
25 minutes		By using the car body designs in Unit 4 as well as brand identity from Unit 3, allow students to design their showcase box.					
Plenary							
10 minutes		Review the boxes and share the designs with the rest of the class for feedback. Teacher to complete the student evaluation.					
Assessment focus		Students will design their showcase boxes.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					

Grade	5	Subject	DT	Lesson Number	1	Week number	12
Unit	Date			Time		Page number	
5		WC: 18/11/18		45 minutes		151-153	
Equipment Required:				Learning Objectives			
Grade 5 book Pen A3 Paper Card Colors Printer Scissors Glue				5.3 Create a poster			
Time		Starter/Introduction Activity					
5 Minutes		Now that the showcase boxes are ready, students will now create a poster which will be used for their presentation and can also be used at the finals. Show students the poster example on page 151 and make sure to emphasize the importance of the 5 requirements on the top of page 151.					
Main							
35 Minutes		Allow students to begin planning their poster on page 152 and then creating their poster on a3 paper. Make sure they include/consider: <ul style="list-style-type: none"><li>- Team logo and slogan</li><li>- Drawing or photograph of the car</li><li>- A description of the car</li><li>- Talk about how aerodynamics, friction and motion is used in their design</li><li>- Is colourful, well designed and easy to understand.</li></ul>					
Plenary							
5 minutes		Review the posters by sharing them with the rest of the class and allow each team to comment on what they like about their class mates posters. Meanwhile, teacher to complete poster evaluation on page 153.					
Assessment focus		Students will design and create a poster as a team.					
Learning curve		The entire course plus specific instructional videos are available on Learning Curve via this link;					

<b>Grade</b>	5	<b>Subject</b>	DT	<b>Lesson Number</b>	2	<b>Week number</b>	12
<b>Unit</b>		<b>Date</b>		<b>Time</b>		<b>Page number</b>	
5		WC: 18/11/18		45 minutes		154-157	
<b>Equipment Required:</b>				<b><u>Learning Objectives</u></b>			
Grade 5 book Pen Paper Computer + PowerPoint				5.2 Prepare a verbal presentation			
<b>Key words</b>				presentable, audience, logical, visuals,			
<b>Time</b>		<b>Starter/Introduction Activity</b>					
5 Minutes		Briefly talk about the requirements of the presentation on page 154-155. Everything will have been covered throughout the course of the book, so putting their presentations together should be quite straightforward.					
<b>Main</b>							
35 Minutes		Allow students time to work in their teams to prepare their presentation on Microsoft PowerPoint or a different format.					
<b><u>Plenary</u></b>							
5 minutes		Finally, to get them ready for their presentation next lesson, talk through some tips on pages 156-157.					
<b><u>Assessment focus</u></b>		Students will successfully prepare a verbal presentation including all the questions from the requirements.					
<b><u>Learning curve</u></b>		The entire course plus specific instructional videos are available on Learning Curve via this link;					

Grade	5	Subject	DT	Lesson number	3	Week number	12
Unit		Date		Time		Page number	
5		WC: 18/11/18		45 minutes		158-161	
Equipment required				Learning objectives			
Grade 5 book Pen Paper Computer + PowerPoint				5.5 Complete a self-evaluation.			
Time		Starter/Introduction activity					
5 minutes		Allow students some time to prepare their groups for the team presentation and create an order that they will follow.					
Main							
35 minutes		Begin the presentations, allowing each team no more than a couple of minutes each.  Fill out the presentation evaluation as each team presents their project.					
Plenary							
5 minutes		Finally, get students to complete Activity 4 on page 159 which is a self-evaluation.  Teacher to complete teacher evaluation on pages 160-161.					
Assessment focus		Students will successfully carry out a verbal presentation and complete the self-evaluation on page 159.					
Learning Curve		The entire course plus specific instructional videos are available on Learning Curve via this link:					