purple mash

Computing Scheme of Work

Unit 4.7 –

Effective Searching

Contents

Introduction

This unit builds upon the skills and knowledge developed in Year 2 in Unit 2.5 – Effective Searching. The lesson makes use of the Google search engine but could be adapted to be used with an alternative.

These lessons are based upon Basic Search Lesson Plans produced by Google, which can be found at https://sites.google.com/site/gwebsearcheducation/lessonplans.

Medium-Term Plan

Lesson	Title	Success Criteria
1	Using a Search Engine	• Children can structure search queries to locate specific information.
2	Use Search Effectively to Answer Questions	• Children have used search to answer a series of questions. • Children have written search questions for a friend to solve.
3	Reliable Information Sources	• Children can analyse the contents of a web page for clues about the credibility of the information.

Lesson 1 – Using a Search Engine

Aim

- To locate information on the search results page.

Success Criteria

- Children can structure search queries to locate specific information.

Resources

Unless otherwise stated, all resources can be found on the main unit 4.7 page. From here, click on the icon to set a resource as a 2Do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you do not lose this page.

- Internet Recap Quiz
- Lesson 1, Worksheet 1 – Finding Information with Google. This is at the end of this document; each child will need a copy.

Activities

Introduction	Display **slide 2** and outline the lesson aims.
	Display **slide 3** and outline the success criteria.
Introduction: Finding Information.	Display **slide 4**.
	Recap learning from the previous unit linking to this in year 2 and launch the **Internet Recap Quiz** by clicking the icon. Go through as a class. Elicit ideas about how it is possible to answer much more than simple search queries using search engine e.g. weather, spelling, postcodes, answers to calculations, sports results etc.
Using Google to Find Answers	Use **slides 5-11**.
	Children can try on their devices and using different search engines.
Activity 1: Finding Information	Use **slide 12** to explain the activity. Ensure children have copy of the handout. Children should find the answers to the questions using search queries techniques.

Activity 2: Extension	Display **slide 13** and share the extension with the children. Get them to look at the two images and discuss why the results might be different even with the same search query used. Elicit why it is important to use different search engines particularly when discerning the credibility of information. Some sources could be flawed or there might be some bias. Corroborating information is a good digital skill.
Review Success Criteria	Use **slide 8** to evaluate success of meeting success criteria. Children could rate how well they achieved this using a show of hands.

Lesson 2 – Use Search Effectively to Answer Questions

Aims

- To use search effectively to find out information.

Success criteria

- Children have used search to answer a series of questions.
- Children have written search questions for a friend to solve.

Resources

- Lesson 2 – Worksheet 1 – Search Quiz. This is at the end of this document; each child will need a copy.

Activities

Introduction	Display **slide 2** and outline the lesson aims.
	Display **slide 3** and outline the success criteria.
Introduction: Effective searching	Display **slide 4**. Explain that we will be practising 'effective searching' today. Reveal the search tips the children should consider before starting the main task.
Activity 1: Search Quiz	Display **slide 5**. Children should use a search engine on their devices to answer the questions on the Search Quiz worksheet. Ask the children to compare their answers with their friend's and identify if there are any differences and why. You might choose to have half the class using a different search engine to allow for more discussion around differences in results.
Activity 2: Extension	Use **slide 6** to share the extension.
	Children should test their answers to their questions first, before sharing the questions with others.

Review Success Criteria	Use **slide 7** to evaluate success of meeting success criteria. Children could rate how well they achieved this using a show of hands.

Lesson 3 – Reliable Information Sources

Aim

- To assess whether an information source is true and reliable.

Success Criteria

- Children can analyse the contents of a web page for clues about the credibility of the information.

Resources

Lesson 3 – Information Cards. This is at the end of this document; each child will need a copy.

Activities

Introduction	Display **slide 2** and outline the lesson aims.
	Display **slide 3** and outline the success criteria.
Introduction: Reliable Information	Display **slide 4**.
	Launch 2Connect from the icon on the slide or take notes on children's ideas of how we check if something is truthful? Reveal tips for checking if something is true on the Internet and continue to scribe ideas.
Activity 1: True or False?	Display **slide 5**. Ask the children to read the True or False Information Card pairs and make informed judgements as to which is true, which is false. Ask them to share their initial conclusions. Then ask the children to fact check the cards using the Internet. Reinforce that not everything online is true and that they should use multiple sources to check they are correct. Ask the class to compare their results of what they found out. Were their discrepancies? Why?

Activity 2: Something for Fun	Display **slide 6. (Optional if time)** Explain that search engines are not always for searching. Introduce the idea of *Easter eggs*. Share the definition with the children. Children to then try out the listed phrases in Google. ***Check the listed phrases before delivering the lesson.**
Activity 3: Extension	Use **slide 7** to share the extension activity. Children to read the hypothetical situation and then see if they can answer the associated questions. Reveal possible answers when children are ready. Ensure children understand possible bias and that it's important to have a variety of sources.
Review Success Criteria	Use **slide 8** to evaluate success of meeting success criteria. Children could rate how well they achieved this using a show of hands.

Name: _____ Date: _____

Use a search engine to search for information to answer these questions.

1. What is the forecast for the weather in London?	
2. What is the forecast for the weather in New York?	
3. What time is it in Sydney?	
4. What was the last result for Manchester City?	
5. Find the name and address of a restaurant near to where you live.	
6. What is the postcode of the Prime Minister's house?	
7. What is 6307 x 234?	
8. Convert 6 feet 5 inches into centimetres.	
9. Is 'misarable' spelt correctly?	
10. Is 'cematary' spelt correctly?	
11. What is a dictionary definition of 'happy'?	
12. What is a dictionary definition of 'galaxy'?	
13. How many people live in the United Kingdom?	
14. How many people live in Manchester?	

Name _____ Date _____

Search Quiz: Use a search engine to find the answers to these questions.

1.	3456 + 78091 =?	
2.	700000 / 89 =?	
3.	What is 33% of 34,567?	
4.	How many centimetres are in 5 miles?	
5.	How many minutes are in 40 years?	
6.	What is the equivalent of £20 in rupees?	
7.	For what town is the postcode SK used?	
8.	What is the meaning of 'universe'?	
9.	Is 'seperated' spelt correctly?	
10.	What is the population of Birmingham in England?	
11.	How old is Sergio Aguero?	
12.	When is Prince William's birthday?	
13.	What is the predicted weather for London tomorrow?	
14.	What time is it in Beijing, China?	
15.	What time is it in Johannesburg, South Africa?	

16.	What is the score of the last game played by the England football team?	
17.	How many people live in the United States?	
18.	Correct the spelling of 'Misisippi'.	
19.	Find a Chinese restaurant near to your school.	
20.	What will the weather be like three days from now in New York?	

Extension: Write five questions of your own.

1.	
2.	
3.	
4.	
5.	

Information Cards

True or false: Frogs have to drink lots of water

True. Frogs live near water and can often be seen hopping in and out of ponds. They require lots of water to keep them healthy and strong. The only way that they can get water into their bodies is by drinking vast amounts of water. If they do not drink enough water, their skin will quickly dry up which exposes them to greater risk of getting infections.

True or false: Frogs have to drink lots of water

False. Frogs do not need to drink any water at all. Frogs are very unique in the fact that they can absorb all the water they need to stay healthy through their skin. By simply submerging their bodies in water, such as ponds, they can absorb water.

True or false: Camels can walk 100 miles in the desert without water

True. Camels can walk for many miles without drinking any water. Their bodies are designed so that they don't sweat a lot, this means they are not losing lots of water. When a camel is able to drink, they will consume many litres of water in a short amount of time.

True or false: Camels can walk 100 miles in the desert without water

False. Despite thinking of camels as very strong animals who seem to like hot and sandy environments, they actually need lots of water regularly. Camels will need regular amounts of water to drink every 5 miles or so, otherwise they will become quickly dehydrated.

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True or false: Scientists have found that goldfish only have a memory of 3 seconds

True. Unfortunately, goldfish only have a very short memory of approximately 3 seconds. If 2 or more goldfish are in the same fish tank, they quickly forget each other exists, until they come into contact with them again. Fortunately, they do seem to have a natural skill of knowing how to forage for food.

True or false: Scientists have found that goldfish only have a memory of 3 seconds

False. Despite over the years people referring to goldfish of having a very short memory, this is simply not true. Scientists have found that some goldfish can have a memory for as long as 3 months. Goldfish will remember things of significance such as an ornament placed in their tank and that there are other fish in the tank.
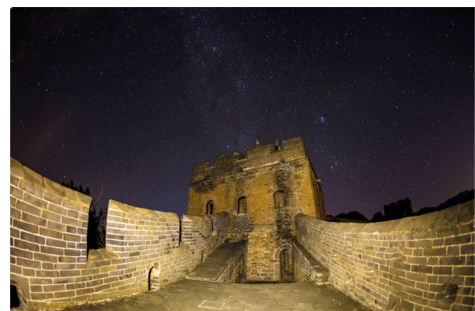
True or false: The Great Wall of China is visible from space

False. The Great Wall of China is a huge and magnificent piece of engineering over 20,000km long. However, despite its length, it is not visible from space by an astronaut, even looking from low orbit. This has been a myth for many years that simply isn't true.

True or false: The Great Wall of China is visible from space

True. The Great Wall of China is a wonderful piece of engineering that has a length of 21,196 km. This huge length makes it easily visible by astronauts orbiting the Earth. Astronauts don't require any specialist equipment to see it, they just need to make sure they are looking down on Earth as they travel over it.

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Assessment Guidance

The unit overview for year 4 contains details of national curricula mapped to the Purple Mash Units. The following information is an exemplar of what a child at an expected level would be able to demonstrate when completing this unit with additional exemplars to demonstrate how this would vary for a child with emerging or exceeding achievements.

Assessment Guidance	
Emerging	Children have some awareness that search engines can provide helpful information to support our daily lives such as: Weather forecasts, postcodes, answer calculations, provide definitions and sport results (Unit 4.7 Lesson 1 & 2). They can search for intended information with some degree of accuracy demonstrated in the results returned.
Expected	Children can use search engines to provide helpful information to support their learning (Unit 4.7 Lesson 1 & 2). They can search for intended information with a degree of accuracy and thus know that key words can be more effective than sentences when searching. Most children will be able to locate information from the internet via a search engine using effective techniques such as truncating a question into just key words or concise phrases. They will be aware of the lack of need to use capital letters or punctuation when using this search technique (Unit 4.7. Lesson 2). Most children will be able to analyse the contents of a web page for obvious clues about the credibility of the information. They will be able to work in small groups to decide collectively if a website has questionable credibility (Unit 4.7, Lesson 3).
Exceeding	Children can use search engines effectively to find intended information (Unit 4.7 Lesson 1 & 2) and are fully aware of the benefits of using key words. They can interpret search questions and decide upon how to re-phrase them so that they return the most suitable results in a search engine.