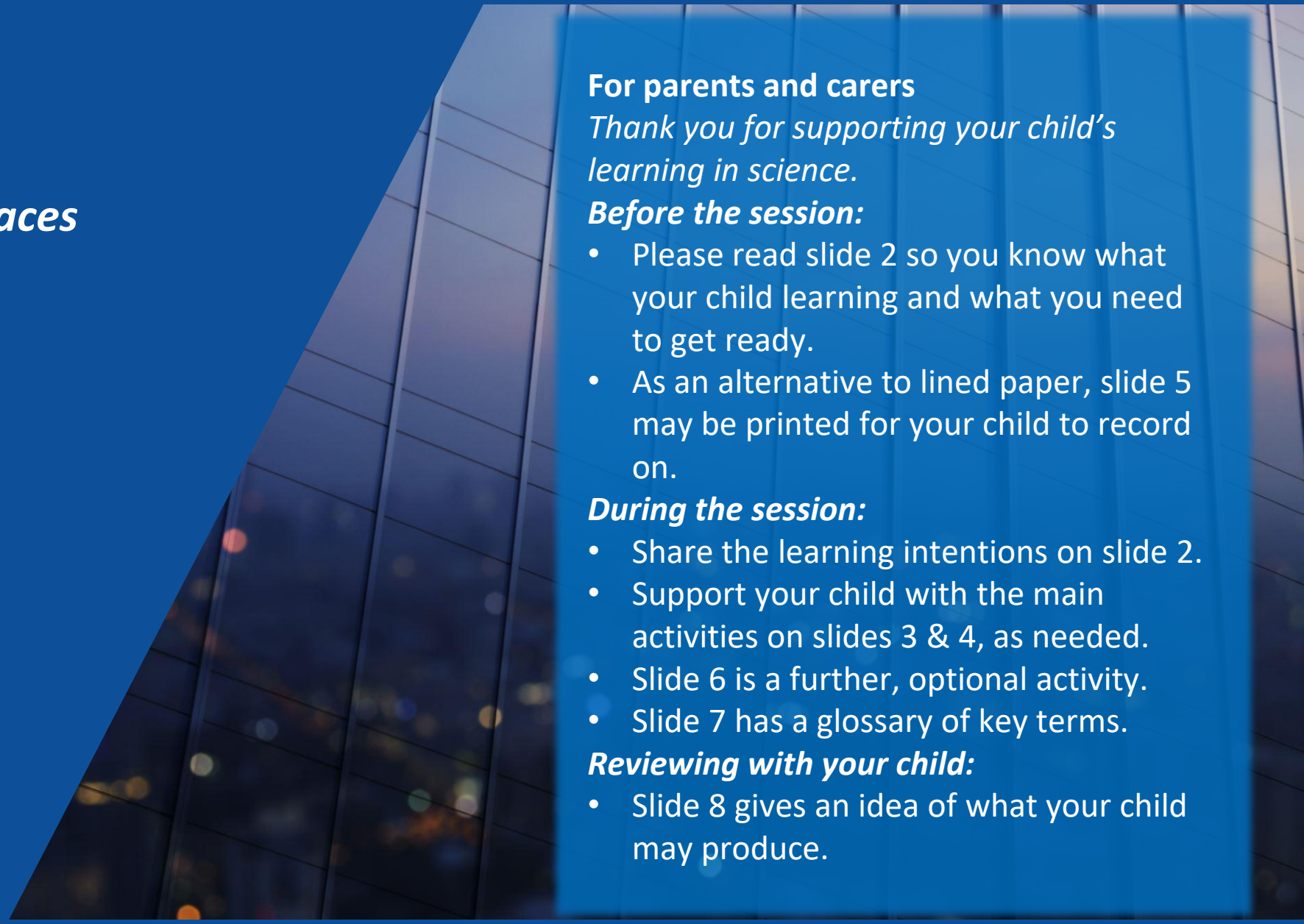
Light

Exploring reflective surfaces

Year 3 / Key Stage 2
Age 7-8



For parents and carers

Thank you for supporting your child's learning in science.

Before the session:

- Please read slide 2 so you know what your child learning and what you need to get ready.
- As an alternative to lined paper, slide 5 may be printed for your child to record on.

During the session:

- Share the learning intentions on slide 2.
- Support your child with the main activities on slides 3 & 4, as needed.
- Slide 6 is a further, optional activity.
- Slide 7 has a glossary of key terms.

Reviewing with your child:

- Slide 8 gives an idea of what your child may produce.

The Association for Science Education

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Key Learning

- Some surfaces reflect light.
- Objects are easier to see when there is less light if they are reflective.

I can…

- identify how objects with different surfaces (e.g. shiny vs matt) are more or less visible.

Activities (pages 3-5): approx. 30-40 mins

- Use lined paper, ruler and pencil.
- Alternatively, print page 5 as a worksheet.

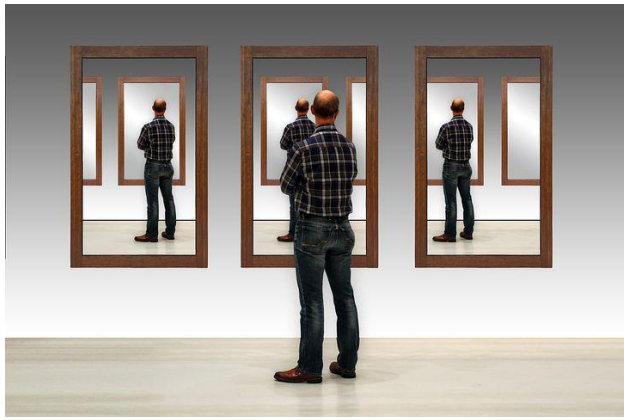
Find out more… (page 6): approx. 10 mins

- Thinking about mirrors and reflective surfaces

Explore, review, think, talk....

What do you already know about reflection?
(5 minutes)

- What do we mean by the word ‘reflection’?
- Think of as many different reflective surfaces as you can.
- How many can you name?



Watch, read, listen...

Reflection
(10 minutes)

- Watch this clip about reflection.
- https://www.bbc.co.uk/bitesize/topics/zbssgk7/articles/zqdxb82

- What did you notice about the mirror and the black wall?

- When light from an object is reflected by a surface, it changes direction.
- It bounces off the surface at the same angle as it hits it.
- Smooth, shiny surfaces such as mirrors and polished metals reflect light well.
- Dull and dark surfaces such as dark fabrics do not reflect light well.

Instructions for Activity

- Give the children a range of different materials and a torch. E.g. tin foil, paper, wood, metal, fabric.
- Ask them to explain what happens when they shine the torch on the surface.
- Give them time to explore the reflectiveness of each material.
- Ask them to record their findings in a table (see opposite).

Learning outcome: I can identify how objects with different surfaces (e.g. shiny vs dull) are more or less visible.

Object	**Describe what it looks like**	**How shiny is it? (score out of 5)**
What do you notice about the objects that reflected the most light?		

Glossary of terms

bright: If an object is **bright** it gives out or reflects much light.

dark *(scientific)*: **Dark** is the absence of light.

dark *(everyday)*: Very little amount of light.

dull: If an object is **dull** it is not shiny or bright.

light: **Light** is the form of energy that makes it possible for eyes to see.

material: Anything used for building or making something else.

shiny: Reflecting or glowing with light.

surface: The outside limit or top layer of something.

Encourage for interesting descriptions and use of adjectives to describe each object. Photographs/ drawings are a good idea too!

Possible learning outcome for reviewing your work: I can explore the need for light to see things.

Object	**Describe what it looks like**	**How shiny is it? (score out of 5)**
Tin foil	Silver, shiny	4/5 - quite shiny
Table	Hard, smooth, tough, dull	1/5
C.D.	Shiny, smooth	5/5 – only on one side. The other side is dull
Black paper	Dark, dull, smooth, flat	0/5 – nothing is reflected
Laptop	Silver, smooth, dull	1/5 – only a little bit is reflected

What do you notice about the objects that reflected the most light?
An object is very shiny if light reflects very well from it. Some objects are shinier than others because they reflect light well.

Encourage your child to explain their ideas. This will help them understand light & reflection better.