

KNOWLEDGE, SOURCES AND CERTAINTY

Issues:

- Where does knowledge come from and how should we classify it? Are some types of knowledge more reliable than others? In what ways can we test the reliability of our knowledge?

Learning Objectives:

- Children will be able to identify different knowledge claims and classify these according to their source.
- Children will be able to evaluate the reliability of different kinds of knowledge.

Contents:

- Lesson plan
- Notes and Suggestions
- Resources
 - Knowledge Cards
 - Classification Cards
 - Certainty Card



Activity	Activity Content	Aim
Classification exercise 5 mins	Introduce the idea of classification with a simple exercise: Ask all the girls, that is, 'the class of girls' to stand up and change places. Then ask for the 'class of those with black shoes' to do the same. Invite individual children to select classes and continue until an understanding of classification has been achieved.	Understanding classification
Think – Pair – Share 3 mins	Distribute the 'Knowledge Cards', one or two to each pair. For each knowledge claim the pair must try and answer the question 'How do I know this?'	Inquiring
Class discussion 5-10 mins	Bring the class back together and ask each group to answer the question. Use the answers to generate a limited number of 'kinds' or 'sources' of knowledge. Use the Class Cards to help you in clarifying sources, but try to let the class arrive at the classifications for themselves rather than specifying them in advance. Lay out the Class Cards on the floor or write up on the board, adding any extra sources the class come up with. Ensure that everyone is clear about the meanings of the different classifications. Ask the groups to classify their Knowledge card by considering which Class Card it should be placed with and why. One pupil from each group should read out their card and place it in the appropriate class, explaining why the group made this decision.	Using classification
Offering challenges 5-10 mins	Once all of the cards have been placed, allow a few minutes for challenges: If a pupil thinks that a card has been put in the wrong class, they may move it to another, so long as they can give a reason why. Some cards may move several times, and some may end up being located between classes or in sub sets.	Challenging classifications
Thinking time Small group discussion Exercise 10-15 mins	Looking again at the different classes of knowledge, consider the question: "How reliable is this kind of knowledge?". Place the 'Certainty card' in the centre of the floor. Allow some thinking time so that each kind of knowledge can be considered. Invite discussion to try and decide which kinds of knowledge are the most and the least reliable, that is, which we can be most and least certain of. Prompt: Some kinds of knowledge source have particular problems that can be introduced by thinking of examples of when we make mistakes, thinking we know something and then finding out that we were wrong. See <i>Notes and Suggestions</i> . Invite individual pupils to move Class cards either closer to or farther away from the Certainty card, depending on how reliable they think this kind of knowledge is. Invite challenges to re-position categories, but only if reasons can be given for this.	Assessing reliability Evaluating relative reliability
Closing remarks and discussion	Ask the class to think about what follows from this exercise. Encourage reflection on the way that we can test different kinds of knowledge in order to make it more reliable.	Reflection

Notes and Suggestions

Classification exercise.

The initial answers to the question ‘how do you know?’ are likely to consist of a selection of the following: the teacher told me, I read it in a book, I saw it on tv, I looked it up on the internet, I just know it inside, by looking around, etc. You will need to work with the children to group together these answers and to make the ‘classification of ‘kinds of knowledge’ more precise. For instance, ‘the teacher told me, I read it in a book, I saw it on tv, I looked it up on the internet’ are all examples of second-hand knowledge; ‘I just know it inside’ is knowledge from introspection; ‘by looking around’ is knowledge from the senses (direct experience). Some claims may be difficult to decide upon. In these cases you might leave the card in a limbo space and come back to it later in the exercise.

With more able classes, you may want to have complex classes, combining two or more features, for example, the class of those with a younger sister, a park within walking distance and more than three pairs of shoes. If the class are familiar with the idea of sets, you may want to work with classes, sets and sub-sets.

Certainty exercise

Examples of where a source of knowledge may make the class less reliable might include the following: Direct experience – seeing something at a distance which turns out to be something different when we get closer. Memory – thinking we remember something that turns out to have been a dream, of something another person told us. Second-hand Knowledge – finding out that something you read on the internet was false or a fiction.

Key Concepts:

In this session we investigate the different ways in which we come to know things and the reliability of different kinds of knowledge. One of the principal debates in philosophy concerns whether or not reliable knowledge can be gained from direct experience. Philosophers, belonging to the school of thought called empiricism, hold that direct experience is the only trustworthy source of information. This led Francis Bacon, at the beginning of the Enlightenment, to insist on the importance of physical experiments for gaining knowledge: the scientific experiment can be depended upon, because it takes us to the evidence of direct experience. However, later philosophers, for example Karl Popper, have challenged Bacon’s belief that there is such a thing as direct, pure, experience. Popper asks us to consider that what we call direct experience, really always involves some prejudice or bias: we *always* interpret according to the norms of our culture or individual subjectivity. It is for this reason that, the school of philosophy known as rationalism, declares that the only reliable source of accurate information about the world is through reasoning and logic. Rene Descartes is the most influential rationalist philosopher of modern times. He proposes that, if we want to gain dependable information about the world, we must follow the model of mathematics. The superiority of mathematics stems from the fact that it is based on logical reasoning, not on what our senses appear to show us. Descartes’ recommendation significantly influenced Issac Newton – whose work has become the paradigm for what counts as science. One of the most important questions that contemporary philosophers have to consider is whether or not human beings should put so much trust in mathematics.

Further Reading:

- Bacon, Francis (1620) *The New Organon*.
- Popper, Karl (1963) *Conjectures and Refutations: The Growth of Scientific Knowledge*.
- Descartes, Rene (1637) *Discourse on the Method*.

Category Cards	Explanation	Knowledge Cards
Direct Experience (senses)	Knowledge from the senses.	<ul style="list-style-type: none"> - I am in a classroom - There are other children in the room - It is not freezing cold in this room - Water runs downhill not up
Memory	Knowledge of actual past events that are stored in the brain/mind.	<ul style="list-style-type: none"> - I had breakfast this morning - I have a mother/father/brother/sister - The way to the shops
Second hand Knowledge	Knowledge from a secondary source, e.g. book, internet, television, teacher.	<ul style="list-style-type: none"> - America is a long way away - Henry VIII was king of England in Tudor times - Plants need rain and sunshine to grow - Meerkats protect their young - The French word for hello is 'bonjour'
Logic or Maths	Knowledge that is analytic, that is, it is definitional in nature, such that the predicate-term is equivalent to the subject-term.	<ul style="list-style-type: none"> - $12 + 3 = 15$ - Triangles have three sides - A mother is a woman who has children
Introspection	Knowledge acquired by looking inwards. Self-reflective knowledge.	<ul style="list-style-type: none"> - I am hungry - My big toe hurts - I am thinking - I like doing Philosophy
Reasoning	Knowledge that can be discovered through the use of reasoning.	<ul style="list-style-type: none"> - My friends are not robots - You can't have a bark without a dog - My house is not on the moon - There are people outside this room
Know How	Knowledge that involves a specific skill and is not wholly intellectual.	<ul style="list-style-type: none"> - How to walk - How to talk - How to ride a bike

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I like doing Philosophy

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You can't have a bark without a dog

My house is not on the moon

There are people outside this room

How to talk

How to walk

How to ride a bike

**Direct Experience
(senses)**

Memory

**Second hand
(indirect) Knowledge**

Logic or Maths

Introspection

Reasoning

Know How