

Science Sparks

Why? What? and How?

The Science Sparks provide a range of tools to enable pupils to explore, research, present, consolidate and embed learning in a fun way. These include debate cards, themed snap and a matching pairs cards games all linked to the curriculum.

- Print one of your chosen debate cards per pupil.
- Print 4 sets of snap cards or 2 sets of matching pairs cards per pair/group playing

Science Sparks menu

Debate Cards, Snap Cards and Matching Pairs for the following themes.

- **Space solar system**
- **Space travel**
- **Sound natural**
- **Sound**
- **Environment habitats**
- **Environment climate & weather**

Debate Cards supporting learning

The Debate Cards can be used to support;

- Critical thinking skills.
- Self-expression.
- The broadening of horizons.
- Development of a different perspective.
- Presentation skills.

See the next page for Top Tips for effective Science Sparks debates.

Snap & Pairs Cards supporting learning

- The Snap & Pairs cards can be used as lesson starters to establish prior learning or at the end of the lesson to consolidate learning.
- They can also be a fun game to play at break or lunchtime. Both the Pairs and the Snap cards enable pupils to;
 - Enhance knowledge.
 - Consolidate learning.
 - Identify gaps in learning
 - Communicate and cooperate with others.
 - Have fun while learning

Science Sparks

Top Tips for effective Science Sparks debates

Debating provides pupils with an enjoyable way to develop range of different skills. Debating can help pupils with critical thinking, oracy and communication skills, and team work, planning and research abilities. Debating also help pupils to become more informed about the world around them.

What do you need?

- a debate topic
- a space where pupils can plan and write their notes
- A 'horseshoe' or u-shaped seating plan often works well for debates. This can often be in a classroom.
- Pens, pencils and paper to make notes, access to books, internet to undertake research where appropriate.
- Index cards for speech notes.
- A Science Spark debate card.
- Stopwatch/timer to time speeches

Choosing a debate topic

Choose a Science Spark Debate card(s) related to the science you are learning in class, or choose a card(s) that is a completely new science subject. You can prepare two or three topics at a time with a class of up to 30.

Create two teams for each debate card, the proposing team and the opposing team. They will argue for and against the motion. The group size is flexible, but three or four speakers on each side works well. Allocate each pupil to one side or the other, rather than letting them choose their preferred side. This helps them discover that every issue has two sides. This is one of the powerful lessons of debating. The whole team are involved in the research and evidence finding.

Alternatively you could use the WOW! Videos, Curiosity Challenge Cards or other resource. Also consider using a news clip, picture or a poem to provide inspiration. In pairs or small groups – pupils discuss their thoughts about the resource/subject they are using. What might create a great subject for a debate? Each pair or small group writes their debate subject on a large piece of paper. Place these in the centre of the room. Pupils vote for their favourite debate subject by standing near their favourite question (not their own). Lowest voted questions are removed, continue until you have a single question left, that is what you will debate.

Organising ideas

Each group identifies six points to make their case. Teams need to delete insignificant points and join similar ones together. Numbering and labelling the six points helps to divide them between the speakers. Make clear how long speakers will have to share their argument. Two minutes maximum works at KS2. Start with less time at KS1. To start with pupils may need help with prioritising but they will soon become skilled at it.

Prepare the speeches

All team members are involved in the research, evidence gathering and preparation. The speakers will make notes to develop their points. These need to be persuasive and evidence used to back it up. The third speaker on each side summarises the debate. They will decide on key points to remind the audience

Holding the debate

As the teacher, you can chair the debate but cannot take part or vote.

Each proposer and each opposer can only speak once and remember it is time limited.

Proposers and opposers aim to develop an argument rather than making a single point.

Voting

Pupils vote to support or oppose the motion, depending on which they thought were the most convincing and well-constructed arguments. This may not necessarily be what they believe personally.

The Chair announces the result of the vote.