

Futures Thinking Teachers Pack

Geography



Education is about the future. Educators aim to prepare young people for the future and to support them to fully participate in all aspects of civic, cultural, social, intellectual and economic life. It is therefore important for young people to be given opportunities to think carefully about that future and their role in it.

The Futures Thinking Teaching Pack supports teachers and learners to develop approaches to exploring the future that are not about making predictions, but about considering possible, probable and preferable futures in order to support action and decision-making in the present.¹

The pack, which is closely linked to National Curriculum requirements, engages Key Stage 3 and Key Stage 4 students in grounded inquiry into current trends and possible futures. The activities in the pack encourage students to critically examine their place in the world, the structures and features that bring about the societies they live in, their own beliefs and their agency in shaping their preferable future.

About the Futures Thinking Teacher Pack

The Futures Thinking Pack in brief

15 classroom activities

- Designed to be adaptable for **KS3 and KS4**
- Non-sequential and can be used as standalone resources
- Can be grouped by four subject areas: **Geography, English, PSHE, Citizenship**
- Cross-curricular activities can be grouped together for an off-timetable/collapsed 'Futures Day'

Resources

- Central resources: six Future Worlds Webcasts, Future Worlds: In Brief, Future Worlds: Summarised and the Be Prepared: Future Trends document
- Resources to support each activity
- All resources can be used online or downloaded to be used offline

Curriculum relevance

- National Curriculum links for each activity with reference to the Scottish Curriculum for Excellence for Excellence

Activities

This geography pack consists of 2 classroom activities, each of which is a free-standing resource, with supporting materials and curriculum links. The activities are designed to be adaptable for use with both KS3 and KS4 students and are flexible enough that teachers may adapt them to suit their subject area and the needs of their students.

Suggestions for developing the activities for different age ranges and students with varying levels of support needs are provided, as are ideas for independent learning/homework. Each activity may be condensed for the purpose of a single lesson or expanded to cover a series of lessons.

Activities in this pack are:

The Futures Game
Decoding Data

1. The activities and resources in the pack have been developed from the Beyond Current Horizons programme, a three year Futurelab research project funded by the DCSF, which explored how social and technological change might impact on education over the next 15-20 years and beyond www.beyondcurrenthorizons.org.uk

Resources

As well as providing materials to support each activity, the Futures Thinking Teacher Pack has a set of core central resources that are used for all activities. These are based around the concept of three possible future worlds that have been created to prompt discussion and debate.

These are a set of webcasts in which young people explain what life might be like in the three possible future worlds and written overviews of each of those worlds. There is also a Be Prepared document that contains details of some of the current trends which have been used as a basis for proposing the three future worlds.

Using the Three Future Worlds²

It is important for both teachers and learners to understand that the three future worlds described are not predictions. They are possible futures which may develop around the year 2025 and beyond, if current trends continue.

The worlds are neither dystopian nor utopian and it is important that teachers encourage students to critically analyse the potential upsides and downsides of each. They are intended to challenge assumptions and stereotypical visions of the future and spark debate and discussion.

The activities in the pack support teachers and learners to use the three worlds to make explicit links between the past, present and future and to use them as a springboard for developing their ideas about what the future might mean for individuals and society.

All activities and supporting materials are available online and can be downloaded, as can the central resources. In the few activities that are supported by specially created interactive resources available only online, an offline alternative is suggested so that it is not essential to have internet access in the classroom.

For teachers and learners keen to explore the use of digital technology to support their futures thinking and the creative communication of their ideas, there are suggestions for using online tools throughout the pack.

A useful listing of other web 2.0 tools which may be used in addition or as an alternative to the ones suggested within the activity can be found at

Web 2.0:

Cool Tools for Schools

cooltoolsforschools.wikispaces.com

2. The three possible future worlds are adapted from those proposed by the Beyond Current Horizons research programme. The original material can be accessed here www.beyondcurrenthorizons.org.uk/scenarios

Curriculum relevance

All the activities in the Futures Thinking Teachers Pack support the core, statutory aims of the National Curriculum which are to enable students to become successful learners, confident individuals and responsible citizens.

Links to Futures Thinking in the National Curriculum aims³

Successful learners

- have enquiring minds and think for themselves to process information, reason, question and evaluate
- know about big ideas and events that shape our world

Confident individuals

- who are able to live safe, healthy and fulfilling lives
- have secure values and beliefs, and have principles to distinguish right from wrong

Responsible citizens

- who make a positive contribution to society
- take account of the needs of present and future generations in the choices they make

Each activity has an accompanying table detailing its relevance to specific National Curriculum subjects, Cross-Curriculum Dimensions, Personal, Learning and Thinking Skills (PLTS) and the Scottish Curriculum for Excellence.

The curriculum subject links for each activity are outlined in the Index.

The four subjects with the strongest curriculum links to futures thinking and the activities in the pack are detailed below:

– Citizenship:

Citizenship education aims to equip students with the knowledge and understanding to become active members of society who will take an effective role in public life. Knowledge of the Law, the rights and responsibilities of citizens, the structure of democracy and an understanding and acceptance of diversity allows students to participate in local, national and global debates. Engagement with futures thinking is essential for students to start making connections between their place in the world and how decisions made now will affect the development of the future and future generations

Example of curriculum link:

Assess critically the impact of their actions on communities and the wider world, now and in the future, and make recommendations to others for further action (KS4, Taking informed and responsible action, 2.3c)

– PSHE:

The PSHE programme of study aims to support students to develop as mature and confident people who can manage risk, make informed decisions, and lead happy and fulfilled lives both financially and emotionally. Students learn to recognise their strengths and weaknesses in a variety of fields and to develop the self-esteem needed to make necessary changes. Activities in the futures thinking teachers pack supports students to consider the future in a grounded and evidence based way and explore what their lives might be like in three different futures. Projecting themselves into future settings allows students to assess what skills they have now, and what skills and plans they may need to develop in order to follow their chosen paths.

Example of curriculum links:

Investigate the main trends in employment and relate these to their career plan (KS3, Exploration, 2.2c)

3. Full details of the Secondary National Curriculum aims can be found online at curriculum.qcda.gov.uk/key-stages-3-and-4/aims-values-and-purposes/index.aspx

– **English:**

As a core subject, the study of English encourages students to develop critical awareness and the language of analysis. These central skills can be applied to a wide variety of texts, including the multimodal nature of media texts – texts which are likely to proliferate in the future. The ability to articulate ideas and opinions and to listen and respond appropriately to those of others is central to students' engagement with this critical analysis. These vital skills will enable students to challenge, question and articulate as they move from the present into the future. The activities in the pack support students to critically engage with the concept of the future and to challenge assumptions by interrogating the ways in which the future is portrayed.

Example of curriculum links:

Question and reflect on different ideas, opinions, assumptions, beliefs and values when exploring topical and controversial issues and problems (KS4 Critical Thinking and Enquiry, 2.1a)

– **Geography:**

The study of geography encourages students to realise that although the world is challenging, complex and ever-changing, we are all interconnected on many different levels. This subject shows students how people and their environments, both locally and globally, are intrinsically linked and forever interacting. The diversity of peoples and places, societies and economies are all critical elements in how the future will evolve. Exploring what might happen in the future if current trends continue allows students to make the connection between decisions being made now and future scenarios.

Example of curriculum links:

Understand how sequences of events and activities in the physical and human worlds lead to change in places, landscapes and society (KS3, Physical and human processes, 1.5a)

Acknowledgements

This pack has been created by Futurelab from the original outputs of the Beyond Current Horizons research programme.

The curriculum links were explored and the activities were developed and reviewed in collaboration with a small group of secondary school teachers who attended a participatory, ideas generating workshop in November 2009.

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Digital Vision developed and produced the video scenarios.

Sarah Payton
with **Claire Denney, Marisa Harlington,**
Graham Hopkins and **Duncan Thomson**

The Futures Game

Curriculum links

Geography

PLTS: independent enquirers, creative thinkers, team workers, effective participators
Cross-curriculum dimensions: global dimension and sustainable development, creativity and critical thinking

See the section at the end of this activity

Purpose

This game was designed by a group of researchers with an interest in encouraging people to explore uncertainties when thinking about possible futures. The aim of The Futures Game¹ is to playfully explore the ways in which diverse trends might interact to create diverse futures. It supports students to consider cause-and-effect relationships between current trends and future events and also develops their understanding of there being several possible futures.

Preparation

There is an online version of the Futures Game available with this pack and the game can also be played offline by downloading and printing off the image cards and mission cards.

Whether your students are playing online or offline, they will need hard copies of the Futures Game score card.

In both the online and offline version there are sufficient resources for a maximum of 15 pairs (or maximum group of three) students.

For the online version, each pair will need internet access.

Instructions are given for both the online and offline version of the game.

Resources

Futures Game

Futures Game score card
(page 5 of this activity)

1. Tsing, A. and Pollman, E. (2005) Global Futures: The Game, in Histories of the Future, Rosenberg et al (eds), Duke University Press

The Futures Game – Online

1. Divide the class into pairs/small groups. Each pair/small group will need internet access. Number the pairs/small groups of students, one to however many there are (maximum 15). This is their group number. They will need to remember their number for the duration of the game.
2. At the top of the online game screen is a drop down box. Ask the students to choose the drop down option for their group number and round one, ie. group one will choose 'group one round one'.
3. The students will be presented with three images on the screen. Ask them to choose the image that appeals to them most and to discard the other two by dragging them to the edge of the screen (NB To enlarge an image, double click on it).

The task is to make up a short story about the image they have chosen:

- _ Who or what is the subject of the image card?
- _ Where is it? When is it?
- _ What's happening in the image?

This introduces students to creating stories from images. The idea is to be as creative as possible whilst making the story seem plausible (this may need to be modeled to students).

Ask students to share their story with the rest of the class/another group and invite comments on the plausibility and creativity of the stories.

4. Now ask students to choose the drop down option from the top of their page that corresponds to their group number and round two ie. group one will choose 'group one round two'.
5. The website will present students with three more image cards plus a mission card.

Warn students that they do not necessarily have to agree with their mission card, it's just their mission for the game!

From the three image cards, students should carefully choose their preferred two, discarding the one that least appeals to them (by dragging it to the edge of the screen).

6. Encourage students to think carefully about their mission.

- _ What might the world be like if their mission was completed?
- _ Why might their mission be necessary?
- _ What might need to happen in order for their mission to be completed?

Then, ask students to describe an unlikely or unexpected connection between their two chosen images that creates an imaginative and creative, yet plausible set of conditions that would lead to the completion of their mission. Before they make-up their stories, show students the Futures Game score card so they can keep in mind the criteria their peers will be scoring them against.

The score card has some space for students to enter their own criteria.

Ask students to get into groups, listen to all the stories in their group and rate each others' stories. The top scoring stories from each group tell their stories to class.

The Futures Game – Offline

1. Divide the class into groups of about eight – students will work in pairs within in the groups.
2. Give each pair of students three future image cards. Having considered them, the pair must choose the one that appeals to them both the most and return the others to you.
3. The task is to make up a short story about the image they have chosen:

- _ Who or what is the subject of the image card?
- _ Where is it? When is it?
- _ What's happening in the image?

This introduces students to creating stories from images. The idea is to be as creative as possible whilst making the story seem plausible (this may need to be modeled to students).

Ask students share their story with the rest of their group and invite comments on the plausibility and creativity of the stories.

4. Now give each pair a Futures Game mission card.

Warn students that they do not necessarily have to agree with their mission card, it's just their mission for the game!

5. Give each pair of students two more image cards. From the three, they carefully choose their preferred two, discarding the one that least appeals to them.

Encourage students to think carefully about their mission.

- _ Why might their mission be necessary?
- _ What might need to happen in order for their mission to be completed?
- _ What might the world be like if their mission was completed?

6. Then, ask students to describe an unlikely or unexpected connection between their two chosen images that creates an imaginative and creative, yet plausible set of conditions that would lead to the completion of their mission. Before they make-up their stories, show students the Futures Game score card so they can keep in mind the criteria their peers will be scoring them against.

The score card has some space for students to enter their own criteria.

Ask students to listen to all the stories in their group and rate each others' stories. The top scoring stories from each group tell their stories to class.

Differentiation and extended learning

The Futures Game can be played with a range of learners in both Key Stage 3 (Years 7-9) and Key Stage 4 (Years 10-11). Below are some suggestions for both younger and older students, as well as those needing extra support and extension. There are also suggestions for independent learning outside the classroom.

Supported/younger learners:

For lower Key Stage 3 students or students needing more support try the following:

- Run through an example of the whole game as a class first
- The online version allows you to show all the images or all the mission cards on the screen at the same time. You could play the game as a class with students coming to the interactive whiteboard at the front to choose their images and missions

Extended/older learners:

For Key Stage 4 students or students needing extension work try the following:

- Students could devise their own futures game mission cards

Independent learning:

Suggested ideas for activities outside the classroom:

- This futures game is based around geographical ideas. Students could devise missions and source extra images to come up with a futures game that explores connections around another subject area

Notes

The Futures Game score card

Give each pair/group a score from 1-5 (1 low, 5 high) in each of the boxes for each round of the game.

GROUP NAME/NUMBER:								
Overall, how well was the story imagined and told?								
How imaginative & creative was the 'unexpected connection' between the images?								
How well does the story connect to real world knowledge?								
How well does the player's story accomplish their mission?								
Extra criteria decided by class/group:								
TOTAL SCORE								

Subjects:	KEY STAGE 3	KEY STAGE 4
<p>Geography</p> <p>Range and content:</p> <ul style="list-style-type: none"> _ Considers interactions between people and their environments <p>Curriculum opportunities:</p> <ul style="list-style-type: none"> _ Make links between geography and other subjects, including citizenship and ICT, and other areas of the curriculum, including sustainability and global dimension 	<p>Place:</p> <ul style="list-style-type: none"> _ Developing 'geographical imaginations' of places (1.1b) <p>Physical and human processes:</p> <ul style="list-style-type: none"> _ Understanding how sequences of events and activities in the physical and human worlds lead to change in places, landscapes and societies (1.5a) <p>Environmental interaction and sustainable development:</p> <ul style="list-style-type: none"> _ Understanding that the physical and human dimensions of the environment are interrelated and together influence environmental change (1.6a) <p>Geographical enquiry:</p> <ul style="list-style-type: none"> _ Collect, record and display information 	<p>No Statutory requirement</p>

PLTS	Cross-Curriculum Dimensions	Curriculum for Excellence (SQA)
<p>Independent enquirers:</p> <ul style="list-style-type: none"> _ Explore issues, events or problems from different perspectives <p>Creative thinkers:</p> <ul style="list-style-type: none"> _ Generate ideas and explore possibilities _ Question their own and others' assumptions <p>Team workers:</p> <ul style="list-style-type: none"> _ Work confidently with others _ Listen to and take account of different views <p>Effective participators:</p> <ul style="list-style-type: none"> _ Actively engage with issues that affect them and those around them _ Discuss issues of concern 	<p>Global dimension and sustainable development:</p> <ul style="list-style-type: none"> _ Consider alternative future scenarios for the planet and the risks associated with not tackling sustainability _ Think imaginatively about what individuals can do to develop a more informed society and sustainable future 	<p>The Futures Game allows opportunities for study in the following curriculum areas in Scottish schools and colleges:</p> <p>S 1-4</p> <ul style="list-style-type: none"> _ Social studies – People, place and environment

Decoding Data

Curriculum links

Maths

Geography

PLTS: independent enquirers, creative thinkers, team workers, effective participators:

Cross-curriculum dimensions: technology and the media, creativity and critical thinking

See the section at the end of this activity


Purpose

Decoding Data explores the different ways in which information and data from surveys, polls and research can be interpreted and how this may be used to try to consider future developments on a variety of issues. This activity also looks at some of the current debates about how this kind of information is presented to the general public and encourages students to develop the appropriate critical and analytical skills that are involved in handling data.


Preparation


You could research and gather material about some current debates in society and/or research the interpretation of data, particularly around the issue of climate change. You may also wish to gather national statistics or other material to use with this exercise.


Resources

 **Be Prepared: Future Trends**

Suggested Web Tools

 **stats4schools**
Comprehensive web resource collating nearly 1,000 large statistical datasets.
www.stats4schools.gov.uk

 **SurveyMonkey**
Design your survey, collect responses and analyse results.
www.surveymonkey.com

 **Polldaddy**
Create your surveys and polls using custom templates or create your own. Use reporting engine to aggregate, print and export your results.
polldaddy.com

Suggested starter activity

As a class, brainstorm and discuss ways that organisations gather information and data about people eg consumer patterns in supermarkets via reward card schemes, online behaviour via cookies, surveys and polls to gather opinions and beliefs.

- _ What kind of information is gathered about individuals?
- _ How is information about people gathered?
- _ Who do you think uses this information and why?

Main Activity

1. In pairs students look at the Be Prepared: Future Trends resource.
 - _ How do students think these forecasts are made?
 - _ Which statements do they think make use of statistics?
 - _ How have these statistics been used?
2. In groups or pairs, students look at a sample of national statistics from a variety of organisations. Try the Stats4schools site from the suggested web tools section.
 - _ What type of data is being studied?
 - _ What forecasts can students make based upon the dataset they are studying?
 - _ What justification can students give for making these interpretations
3. Divide students into groups and ask them to choose an issue they are interested in. Ask them to research people's beliefs and behaviour on the subject in order to try to forecast a future trend eg if they are interested in sustainability, they might want to explore people's beliefs about recycling and whether they have changed their recycling behaviour over the past three to five years.
4. Ask students to design a questionnaire aimed at their peer groups. This could be done online using one of the suggested tools.
5. In their groups, ask the students to present the findings from their survey. In their presentations students should:

- _ Describe the background to their survey.
- _ Evaluate and interpret their results.
- _ Use appropriate statistical diagrams to present their findings back to their audience.
- _ Explain how they gathered data and information and what type of data was used.
- _ Make forecasts based on the information they have found with justification for these extrapolations.
- _ Evaluate and consider the reliability of conclusions drawn and forecast made.

Ask the class to assess each presentation based on:

- _ Quality of presentation.
- _ Quality of research and data collection.
- _ Appropriateness of chosen methods to represent data.
- _ Quality of interpretation.

✔ Tips for creating a questionnaire:

- _ Ensure that the majority of your questions are either multiple choice or yes/no responses. This makes answers easier to analyse.
- _ Do not ask leading questions, maintain neutrality.
- _ Allow one section for your interviewees to record their own opinions in more detail.
- _ Use one of the suggested web tools to create an online questionnaire.
- _ Use statistics to present your findings back to your audience.

Differentiation and extended learning

Decoding Data can be adapted for the range of learners in both Key Stage 3 (Years 7-9) and Key Stage 4 (Years 10-11). Below are some suggestions for both younger and older students, as well as those needing extra support and extension. There are also suggestions for independent learning outside the classroom.

Supported/younger learners:

For lower Key Stage 3 students or students needing more support try the following:

- _ Choose just one dataset to examine as a class from stats4schools
- _ Design one whole class survey in which everyone takes part in designing the questions and collecting the results
- _ Divide class into groups and each group makes its own interpretations and predictions
- _ Compare each group's findings – what differences and similarities are there between groups? What does this tell us about the nature of statistics in predicting future events?

Extended/older learners:

For Key Stage 4 students or students needing extension work try the following:

- _ Look at one dataset from stats4schools.
- _ What alternative interpretations could there be for the set of statistics they have chosen? Discuss the implications of data manipulation and find examples of potential manipulation of statistics in history
- _ Consider how different methods of sampling and different sample sizes may affect reliability of conclusions drawn

Independent learning:

Suggested ideas for activities outside the classroom:

- _ Find one story in which statistics and surveys have been used to present a certain attitude or viewpoint
- _ Present findings to the rest of the class

Notes

Subjects:	KEY STAGE 3	KEY STAGE 4
<p>Mathematics</p> <p>Range and content:</p> <ul style="list-style-type: none"> _ Allows students to apply their knowledge, skills and understanding to relevant real-world situations _ Uses statistics <p>Curriculum opportunities:</p> <ul style="list-style-type: none"> _ Enables students to work on a sequence of tasks that involve using the same mathematics in increasingly difficult or unfamiliar contexts _ Allows student to work on problems that arise in other subjects and in contexts beyond the school 	<p>Statistics:</p> <ul style="list-style-type: none"> _ The Handling Data cycle, incorporating all key processes (3.3 a,b,c,d): _ Specifying the problem and planning _ Collecting data _ Processing and presenting data _ Interpreting and discussing the results 	<p>Statistics:</p> <ul style="list-style-type: none"> _ The Handling Data cycle, incorporating all key processes (3.3 a,b,c,d): _ Specifying the problem and planning _ Collecting data _ Processing and presenting data _ Interpreting and discussing the results
<p>Geography</p> <p>Range and content:</p> <ul style="list-style-type: none"> _ Study of a range of investigations focusing on places, themes and issues _ Investigate key aspects of the UK, including its changing human geography <p>Curriculum opportunities:</p> <ul style="list-style-type: none"> _ Explore real and relevant contemporary contexts _ Use a range of approaches to enquiries _ Examine geographical issues in the news _ Make links between geography and other subjects 	<p>Geographical enquiry:</p> <ul style="list-style-type: none"> _ Collect, record and display information (2.1b) _ Identify bias, opinion and abuse of evidence in sources when investigating issues (2.1c) _ Analyse and evaluate evidence , presenting findings to draw and justify conclusions (2.1d) 	<p>No statutory requirement – however this activity may be useful for GCSE geography and AS/A2 geography</p>

PLTS	Cross-Curriculum Dimensions	Curriculum for Excellence (SQA)
<p>Independent enquirers: _ Explore issues, events or problems from different perspectives</p> <p>Creative thinkers: _ Generate ideas and explore possibilities _ Question their own and others' assumptions</p> <p>Team workers: _ Work confidently with others _ Listen to and take account of different views</p> <p>Effective participators: _ Actively engage with issues that affect them and those around them _ Discuss issues of concern</p>	<p>Technology and the media: _ Use and manage information effectively, learning to question the authenticity, accuracy and reliability of the information they encounter</p> <p>Creativity and critical thinking: _ Collaborate with others through negotiation, modification and compromise _ Refine, modify and develop ideas to ensure they are of real value</p>	<p>Decoding Data allows opportunities for study in the following curriculum areas in Scottish schools and colleges:</p> <p>S 1-4</p> <ul style="list-style-type: none"> _ Numeracy across learning _ Numeracy and mathematics _ People, place and environment

Be Prepared: Future Trends

News is automatically selected to fit your interests – your electronic newspaper has become the “daily me”. You get less boring stuff but can also live in a world you choose, and ignore others.

A system where money follows demand lets students choose the education they want.

Stronger links between industry and education speed up application of new technology.

Fierce global competition makes people move between countries faster, and more often, in search of work.

Information access improves in leaps and bounds. Knowing how to find the right material, combine and edit it are key skills.

On average, people are older and living longer. They look for lifelong learning and a new balance of education, leisure and work.

Public services stop being standardised for the average customer. People expect to fit what the government provides around their own needs.

Nationality means less as people move between countries more often and stay in one place for shorter spells.

Worries about hacking, theft and leaks in information systems and databases run by big organisations, especially public ones, lead individuals to protect their personal data.

Defining who you are, your identity, gets trickier. People question how much it matters whether they are male or female, old or young, able-bodied or disabled, black or white, well or ill, educated or not, and know that they can explore different identities online.

The massive rise in obesity highlights arguments about personal responsibility in exchange for rights to public services like health care.

Support goes both ways between the generations. Sometimes the young look after or pay for the old, sometimes vice-versa.

Worries about divided societies and conflict between cultures lead to increased emphasis on citizenship and group identities.

After the economic depression of 2007-2009, more cooperative and collective societies thrive.

Economic, environmental and social challenges, like global warming, cannot be met by local communities. They call for coordinated national and international action.

Be Prepared: Future Trends

Most people do some voluntary work and younger workers are working to live rather than living to work.

There is increased conflict over scarce resources, including water.

Governments and employers need to keep on older workers and help parents of young children stay in the workforce.

Water shortages, especially from longer droughts in some regions, threaten to disrupt global food supply.

Weather disasters including storms, forest fires, droughts and floods will be bigger and happen more often.

Half the people of western Europe are over 50 by 2030, with an average life expectancy of 90. 25% of the population is over 65 and 15% over 75.

Global warming creates tens of millions of climate refugees by 2050.