



400 YEARS OF EXCELLENCE

**Independent Project and
Challenge Week
13-17 July 2020**

Welcome to the Richard Hale Independent Project and Challenge week!

This week we are giving you the opportunity to choose what, and how, you would like to learn. You may wish to set yourself a new challenge each day from our list of 50 Daily Challenges, or you may prefer to carry out a project on a topic that fascinates you, and which you want to discover more about. You may already know what this topic will be, or you may like to choose from, or be inspired by, our list of ideas. Guidance on how to carry out a successful project is included in this booklet.

I hope you enjoy whatever you choose to learn, and you may of course carry on with your project over the summer holiday. If you would like to share your achievements with us, you can do so by joining the Independent Project and Challenge Week Google Classroom: code cakz5hw

Have a great week!

Dr L Morris

Teaching and Learning Lead



50 Daily Challenges

1. Bake a 'showstopper' cake
2. Listen to a podcast
3. Learn a magic trick and perform it
4. Learn three new words and use them that day
5. Go on a walk and take photos of the nature around you
6. Take a virtual tour of one of England's top museums, theme parks or attractions at: <https://www.visitengland.com/things-do-to-at-home-bored>
7. Complete a jigsaw
8. Design an exercise routine to your favourite tunes
9. Watch a David Attenborough documentary on YouTube
10. Build the largest house of cards you can
11. Create and name a new pizza
12. Learn all the counties of England
13. Watch a TED talk
14. Write and post a letter to a relative or friend
15. Play a new card game
16. Create some illustrations for your favourite book
17. Plant some seeds to grow vegetables, fruit or flowers
18. Make a bug hotel
19. Make a treasure hunt with clues around your house for your family, with a prize at the end
20. Play a board game
21. Learn origami
22. Write an alternative ending to one of your favourite films or books
23. Learn a poem off by heart
24. Cook a meal for your family
25. Solve a crossword
26. Ask an older member of your family to tell you a story from their childhood



27. Learn to spin a ball on your finger
28. Find ten countries on a map that you don't know the location of
29. Make a top ten list of places in the world you want to visit
30. Wash the family car
31. Beat your personal best at keepie uppies
32. Complete a Sudoku
33. Interview a member of your family or a friend to find out more about them
34. Write a poem
35. Make a book of 'Top 10s', for example films, animals, places, songs, actors, sports people
36. Learn 20 capital cities
37. Learn how to play chess
38. Fix something in your house that is broken
39. Find five famous quotes to inspire you
40. Design your dream home
41. Write and host a quiz night for your family
42. Learn to say hello in ten different languages
43. Make a photo album
44. Learn to juggle
45. Learn the alphabet in sign language
46. Do 100 sit ups in a day
47. Rearrange your bedroom to make it better
48. Choreograph a dance routine
49. Make a sundial
50. Learn all the winners of the FIFA World Cup in chronological order



Guidance for a Successful Project

<p>Choose the subject area</p>	<p>Think about something you are personally interested in or something that you need to know more about. There is also an additional list of great ideas on the next page from Richard Hale teachers.</p> <ul style="list-style-type: none"> • A scientific discovery or phenomenon? A scientist? An inventor? • A period of history? An ancient civilisation? A big event or political issue? • A person with an interesting life story? A work of art or an artist? • An interesting place in the world? A book or film? • An aspect of nature? Plants and animals, interesting environments and ecosystems? • A debate or issue that is important to you? • Your personal hobby or interests: music, sport, fashion, technology.... anything!
<p>Start with background reading and searching</p>	<p>Use a mixture of books and online research. It's better to use focused search engines:</p> <ul style="list-style-type: none"> • This is a great search tool: https://www.researchify.co.uk/ • Look at https://www.bbc.co.uk/bitesize for great video clips and information • Wikipedia is an obvious place to start for lots of projects but take care not to get bogged down in details you don't understand: https://www.wikipedia.org/ • Use Youtube as a search tool. https://www.youtube.com/ e.g type in "How did dinosaurs become extinct?" or "Who was Joseph Lister?" <p>Check to see if you think the material feels like it's aimed at the right age-group as best you can.</p>
<p>Zoom in further</p> <p>Set yourself a series of questions or challenges</p>	<p>Once you have read around a subject, frame your project as a question or series of questions. This helps to give your project a sense of purpose and achievement: Give your project a title that is a question like one of these:</p> <ul style="list-style-type: none"> • Who was Nelson Mandela and what did he achieve? • Where was Mesopotamia, and what was life like there? • How does the International Space Station work and what does it do? • What are the 10 most endangered species and how can we protect them? • Who discovered electricity and how did they do it? • What is the Turner Prize and who has won it? • How has the Olympic Games changed in the last 100 years? • How have computers/calculators/bicycles/cars/shoes/food changed over time?
<p>Collect your evidence and information</p>	<p>Before you write anything, collect lots of information. It can be annoying to lose things after you find them so make lots of notes, collect website links in your favourites, cut pictures out of magazines or download them on your computer or phone. A good project is likely to have a nice mix of images and text so try to create a visual record of the story you will tell, like a scrapbook.</p>
<p>Produce a project product in one or more styles</p>	<p>Decide how to present your information. There are so many possibilities including:</p> <ul style="list-style-type: none"> • A newspaper report or magazine article • A personal diary or first person account of your exploration and ideas. • A report to inform readers about what you found: a booklet or a traditional essay. • Fact files: Scroll through these examples. Decide what the most important information is and record it for your readers. • A timeline for anything historical • Maps, graphs, tables and diagrams. • Using technology: make a video or a PowerPoint presentation. • A piece of work inspired by the research e.g. a piece of art. • Make it into a scrapbook, folder or booklet using simple paper and pen. • Write your own quiz based on your research - giving questions and answers.

Additional Project Ideas from RHS Teachers

Who is Steven Spielberg and what influence has he had on the film industry?
Hollywood Stars: Research the life and works of Charlie Chaplin, Fred Astaire, Lawrence Olivier, Morgan Freeman or any Hollywood star
The Globe Theatre over 400 years
Build a paper aeroplane (paper only, no other materials allowed) and see how far it flies (or time in the air). Research designs, make multiple prototypes, test and refine. You could video your best flight.
Investigating Polyhedra: some questions for this project could be: What are the 5 platonic solids? Why can there only be 5 platonic solids, give proof. What is Euler's formula for the platonic solids? What are polyhedra? Can you identify different groups of polyhedra? You might like to make some, nets are here https://www.polyhedra.net/en/
Research your favourite football/rugby/cricket club. You could try to find out when they were founded, where their first home ground was, what their significant achievements were during their history and who their famous players/coaches were. You could delve into their social history to see if they had any notable moments. An example would be Manchester United and the Munich air disaster, West Ham United originally being the Thames Ironworks side in 1895, hence the name Hammers. There would be plenty more examples from other teams. You would start with the team's website and then search for their history. This would be a good report / fact file / timeline exercise.
What is in a smartphone? You may like to consider some or all of the following: <ul style="list-style-type: none">• There are a number of elements in a smart phone (50-60), what are they?• Choose one or two and find out what it does, and what part of the phone is it used for• You could link investigate the ethics behind the mining for the elements in the Congo (Sky news did an investigation inside the Congo mines that exploit children).• The implications of using a smartphone on children in remote parts of the world.• Should manufacturers support repair and not upgrade phones?
Celiac Disease and being gluten free , exploring perspectives on health and disease, and food marketing. <ul style="list-style-type: none">• What is Celiac disease?• What are the symptoms and causes?• How are gluten free products produced?• Are they more expensive to purchase? Is this fair? Are those who are gluten intolerant exploited?• Is the gluten free choice healthy? Is there more sugar/fat?• Do taste tests, try gluten free vs not and compare taste, texture, price etc.• Is gluten harmful to us all, should we all avoid it?
This year would have been the 50th anniversary of Glastonbury music festival , but unfortunately the event was cancelled. Research the history of this world famous festival, the artists who have performed there over the decades, and its significance on popular culture. You could also have a go at designing a line up for each of the stages for the 2021 festival!
Design and make your own instrument. It could be a wind (blown), string (plucked), or percussion (hit) instrument and use any materials you like. Use your artistic skills to sketch it first, then your tech skills to make it, and finally make sure you use your musical skills to play it!
Where and when was music first played or sung? Research the origins of music, why our ancestors did it, what historians think about its significance, and whether there are any links with why we enjoy music today. You could also create a timeline going back as far as you like to show all the major developments and changes in music over the centuries.
What would you have said as Prime Minister to the country on the first day Covid-19 appeared in the UK? What plan would you lay out? What assurances would you give? You could record a press conference speech where you address the nation. You could use Windows Movie Maker to add effects and piece together a video

Research the **creation of the internet** from the very beginning to the present day

A Scientific/**Food Tech Discovery: What is the Maillard Reaction** and who came across it?

Build your own model version of a car, researching how and why Lee Iacocca did it so many years ago in Ford Corporation.

You could also think of a logo; emissions; colours; at what age group you are targeting your product; price; how long your company would take to make a profit...

Here is a link for the Lee Iacocca Documentary and others:

<https://youtu.be/cgGd1DZT49Y> (3.49min, How Lee Iacocca became an American icon)

<https://youtu.be/WXw5BMP8zOE> (50 min, The Legend Lee Iacocca)

Within every protest movement there is a voice which is usually expressed through song. The link below gives a list of 60 songs which are about civil rights. Some are about the American movement, some about Ireland and some about South Africa. Project: Listen to as many songs from the [list](#) as you can. Which ones are best? Why? Create your top 10.

Languages: Around the World in 80ish Days – [click here to access the challenges](#)

In 1872 Jules Verne published this famous novel in which Phileas Fogg and his valet

Passepartout attempted to circumnavigate the world in 80 days. Times have moved on and we reckon that the students at Richard Hale can do this in half this time!

The British Council Languages Challenge (select French or German):

<https://www.britishcouncil.org/school-resources/find/classroom/great-languages-challenge>

The Lumen Lightbulb Language Challenges: <https://www.lightbulblanguages.co.uk/lumen-challenges.htm>

There is also an award for French and German to complete - click the tab on the right hand side and we will organise certificates in September.

Routes into Languages – [Language Immersion Challenge](#)

The Language Immersion Challenge is open to all Year 7 to Year 10 students in England and is designed to keep you practising your target language whilst you are not able to attend school at the current time.

Plastic Pollution: Watch the BBC iPlayer documentary: Ocean Autopsy: The Secret Story Of Our Seas
<https://www.bbc.co.uk/programmes/m000jy2l>

The documentary is an hour and a half and mentions a lot of topics such as bioaccumulation, climate change, weather changes, plastic pollution, micro plastics, and environmental change. You could then either write your own project in a style of your choice, or make a factsheet answering some or all of the following questions from the programme:

1. What is plastic pollution?
2. What are micro plastics?
3. Why was an autopsy carried out on the dolphin?
4. What is bio accumulation?
5. What was the name of the female whale that washed up in Scotland?
6. What caused her to die?
7. How is this toxin transferred to her calf?
8. What effect did this toxin have on her body?
9. What chemicals can travel in the food chain other than mercury?
10. Why does phytoplankton cause large algal blooms?
11. What are the problems caused by these algal blooms?
12. What is echolocation?
13. How does a porpoise dolphin use echolocation to hunt for food?
14. What other chemicals are finding their way into our water systems?
15. How do these pharmaceutical drugs get into the river systems?
16. What drug has the highest concentration in our river systems?
17. What sea has been affected the most by global warming?
18. What effect does increasing temperature have on our oceans?
19. What effect does this have on our weather, has our weather changed or has it stayed the same?
20. What are we doing to reduce plastic pollution?