

STEM ENRICHMENT

Key Question - How can we stop the spread of diseases?

- What diseases/illnesses do you already know about?
- How are diseases spread?
- Are there any organisations already helping to stop the spread of diseases?
- What countries are affected by communicable disease spread and why?
- How can we help?

An expectation would be pupils or class have:

- Group Enrichment books-, photos, quotes, celebration of events

Teaching and Learning Role

- As teaching and Learning Lead, my role will be to advise and support on the programme development, act as a critical friend to challenge thinking and practice, analyse pedagogy and effective practice. I will engage in initial ideas, and help pupils to develop and become confident in managing a global challenge. I will review the global challenge with staff, outside visitors, pupils and parents.

| Date | Activity | Outcome |
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| Week 1 | <p>Introduction to key questions</p> <ul style="list-style-type: none"> • What will be learnt • Discuss why we are learning this • Go through ideas of what could be created to help with the spread of diseases. • Set the idea for the project to design and make a handwashing station. • Go through student pack. <p>(Photos to be taken throughout, used as evidence for final presentations and reflection. And for use in individual student pack)</p> | <p>Self manager Order questions by logical order, what, how, where. Organise time and resources</p> <p>Effective participator Propose practical ways to answer questions</p> |
| Week 2 | <p>How do we stop the spread?</p> <ul style="list-style-type: none"> • Identify how infections are spread • How can we help combat spread? • Prevention - what stops diseases from spreading? <p>Practical session to demonstrate how diseases can be spread.</p> | <p>Team worker Stop the spread simulation game. Hand washing game.</p> <p>Creative thinker Try comparing the data from good hand washing.</p> <p>Effective participator Identify risks in not washing your hands.</p> |
| Week 3 | How can we help? | Reflective learner |

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| | <ul style="list-style-type: none"> ● Introduction to the challenge. To design a handwashing station. ● Set up team names/roles. ● brainstorm ideas and lists of what the students will need to make a hand washing station. (Identify the need of the handwashing station.) ● How can we provide these. ● What do we need to design a station. <p>Asking staff for help</p> | <p>Set own goals about purchases Communicate with different audiences Independent enquirer How to purchase items for the group.</p> |
| Week 4-8 | Building the Handwashing station. | <p>Creative thinker How can we ensure that we can help prevent diseases? Team worker Working together to design a handwashing station. Adopt leadership roles in the group, keep a record of costs and equipment. Testing of the station.</p> |
| Week 9 | <p>How effective is the station</p> <ul style="list-style-type: none"> ● How will it help to combat the spread ● Is it effective? ● How do we know it is effective? ● <p>What improvements could be made?</p> | <p>Effective participator Testing of the hand station and improving from any feedback received.</p> |
| Week 10 | <p>How can we promote our station?</p> <ul style="list-style-type: none"> ● Presentation of examples from each group. ● Students to appraise based on set criteria. | <p>preparation of display materials and presentation to whole class. Team worker Working in teams to produce poster and presentation materials, with assigned roles (assigned by students themselves?) Provide feedback and constructive criticism to others' work Reflective learner Set own success criteria on task Review task progress Invite feedback and act on it positively</p> |
| Week 11 | <p>What have you achieved from this project?</p> <ul style="list-style-type: none"> ● Evaluation - WWW, EBI. ● Self evaluation. | <p>Team worker Working in teams to accomplish task, with self-assigned roles Fairness and confidence in roles Self manager Work towards different goals within group, showing commitment to end product Effective participator Propose practical ways to accomplish task Present persuasive cases for action (e.g. how to make model) (no specific guidance from teacher) Reflective learner Evaluate task's accomplishment</p> |

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| | | Communicate learning about task |
| Week 12 | <p>How does my model compare to a real one?</p> <ul style="list-style-type: none"> • Comparison between their ideas of a handwashing station and images of a real one. • Why are they like this - money, poorer countries. | <p>Reflective learner discuss own success criteria</p> <p>Independent enquirer Identify answers to question Explore issues/problems eg, money, country. Consider influences of beliefs, e.g. religion and health.</p> |

Appendix 1

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| <p>Creative thinker</p> <p>Young people think creatively by generating and exploring ideas, making original connections. They try different ways to tackle a problem, working with others to find imaginative solutions and outcomes that are of value</p> | <p>generate ideas and explore possibilities – link to developing a successful idea to use for social enterprise</p> <ul style="list-style-type: none"> • ask questions to extend their thinking • connect their own and others' ideas and experiences in inventive ways • question their own and others' assumptions • try out alternatives or new solutions and follow ideas through • adapt ideas as circumstances change |
| <p>Team worker</p> <p>Young people work confidently with others, adapting to different contexts and taking responsibility for their own part. They listen to and take account of different views. They form collaborative relationships, resolving issues to reach agreed outcomes.</p> | <ul style="list-style-type: none"> • collaborate with others to work towards common goals of a successful social enterprise • reach agreements, managing discussions to achieve results • adapt behaviour to suit different roles and situations, including leadership roles • show fairness and consideration to others • take responsibility, showing confidence in themselves and their contribution • provide constructive support and feedback to others. |
| <p>Self manager</p> <p>Young people organise themselves, showing personal responsibility,</p> | <ul style="list-style-type: none"> • seek out challenges or new responsibilities and show flexibility when priorities change |

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| <p>initiative, creativity and enterprise with a commitment to learning and self-improvement. They actively embrace change, responding positively to new priorities, coping with challenges and looking for opportunities.</p> | <ul style="list-style-type: none"> • work towards goals, showing initiative, commitment and perseverance • organise time and resources, prioritising actions • anticipate, take and manage risks • deal with competing pressures, including personal and work-related demands • respond positively to change, seeking advice and support when needed • manage their emotions, |
| <p>Effective participator</p> <p>Young people actively engage with issues that affect them and those around them. They play a full part in the life of their school, college, workplace or wider community by taking responsible action to bring improvements for others as well as themselves.</p> | <ul style="list-style-type: none"> • discuss issues of concern, seeking resolution where needed • present a persuasive case for action • propose practical ways forward, breaking these down into manageable steps • identify improvements that would benefit others as well as themselves • try to influence others, negotiating and balancing diverse views to reach workable solutions • act as an advocate for views |
| <p>Reflective learner</p> <p>Young people evaluate their strengths and limitations, setting themselves realistic goals with criteria for success. They monitor their own performance and progress, inviting feedback from others and making changes to further their learning.</p> | <ul style="list-style-type: none"> • assess themselves and others, identifying opportunities and achievements • set goals with success criteria for their development and work • review progress, acting on the outcomes • invite feedback and deal positively with praise, setbacks and criticism • evaluate experiences and learning to inform future progress • communicate their learning in relevant ways for different audiences |
| <p>Independent enquirer</p> | <ul style="list-style-type: none"> • identify questions to answer and problems to resolve |

Young people process and evaluate information in their investigations, planning what to do and how to go about it. They take informed and well-reasoned decisions, recognising that others have different beliefs and attitudes.

- plan and carry out research, appreciating the consequences of decisions
- explore issues, events or problems from different perspectives
- analyse and evaluate information, judging its relevance and value
- consider the influence of circumstances, beliefs and feelings on decisions and events
- support conclusions, using reasoned arguments and evidence.