DESIGN & TECHNOLOGY

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### Overview

**Curriculum Area**
Design and Technology

**Subject Focus**
Can be adapted for use with KS3 or KS4 students for a range of D&T topics. The resource could be applied to most subject areas. It doesn't focus on a particular national curriculum area; it has been designed to support all. The resources would strongly support designing and making, but could also be used to enhance other areas of the curriculum. It works well across all subject disciplines in D&T. These virtues are relevant to any subject area and for success.

**Identified Key Character Qualities**

- **Performance virtues:**
  - Motivation
  - Drive
  - Resilience

- **Intellectual virtues:**
  - Conscientiousness

**Character Focus**
The lessons have been designed to ensure students firstly have an understanding of characteristics and the effects that they can have on their life. It then encourages them to conscientiously think about character traits in others and in turn themselves. The approach to the subject allows time for self reflection, discussion and developing conscientiousness.

The character cards allow opportunities for the students to stop, notice, look and listen, consolidating their understanding of the lessons.

**Differentiation**
Work booklet / keywords / sentence starters.

The sentence starters are there to help prompt the students on the character cards.

**Adaptability**
The open questions asked can be adapted to suit all learners at KS3 and KS4, as it allows the teacher the opportunity to challenge and probe further.

However, the subject of character can allow for lower ability students to be able to understand the project, due to the language used and the gentle approach into the subject.

### Lessons

**Subject Focus**

- **Lesson One:** Understanding character.
- **Lesson Two:** Self-reflection on current progress in D&T project.
- **Lesson Three:** Understand structures and design, plan, make
and evaluate working through the design cycle.

Lesson Four: Use tools, equipment, materials with precision and accuracy. Check and evaluate work as it develops.

Lesson Five: Review and evaluate quality of products.

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<tr>
<th>Character Focus</th>
<th>Lesson One:</th>
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<tr>
<td></td>
<td>• Describe and discuss different character traits</td>
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<td>• Understand what traits can make a ‘good person’</td>
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<td>• Self reflect on what character traits you possess to help you succeed</td>
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<th>Lesson Two:</th>
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<tr>
<td>• Understand what the words motivation, drive and resilience mean</td>
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<td>• Measure current personal progress</td>
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<td>• Recognise that possessing certain character traits could influence success</td>
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<th>Lesson Three:</th>
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<tr>
<td>• Assess how failure can influence success</td>
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<td>• Apply awareness of emotions</td>
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<td>• Evaluate how character traits influence success</td>
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<th>Lesson Four:</th>
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<td>• Explain how the identified character traits can aid progression</td>
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<td>• Recognise and award achievements of others</td>
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<td>• Reflect on personal success and achievement</td>
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<th>Lesson Five:</th>
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<td>• Celebrate awareness of positive character traits</td>
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<td>• Self reflect on the impact of your actions and choices</td>
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<td>• Self reflect on the person you would like to become</td>
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<th>Lesson Activities</th>
<th>Lesson One:</th>
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<td>• Display the first slide, to engage and create a talking point for the students as they settle into the class.</td>
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<td>• Starter activity: 'What is a virtue?' Through discussion gauge the students understanding of the meaning of the keyword.</td>
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<td>• Share the definition with them, to ensure they have a clear understanding.</td>
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<td>• In small groups ask the students to discuss what characteristics they think make a good person.</td>
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<td>• Students feed back their answers to the rest of the class.</td>
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<td>• Hand out the work booklets.</td>
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|                   | • Give each group a pack which has 15 characteristics in, both negative and positive. Ask them to pick out eight characteristics that they think make a good person and place them around the figure. (The booklet includes a description of the 15 characteristics. This list of definitions is for differentiation, so all pupils have a
clear understanding of the meaning for each characteristic.

- Once they have completed this task ask them to list them in order of importance. This activity offers great opportunity for discussion.
- Ask students to explain why they have chosen the words, feeding back on their answers. (The intended aim is for the pupils to gain an understanding of character, and that different characteristics can have an effect on what type of person you become.)
- Ask students to choose three characteristics from the list they have created that they feel they possess that could help steer them towards success.
- Ask students to fill in the next section of the booklet, which asks them to give an example of when they have had to use one of these virtues in the past.
- Plenary: ask students to work in pairs to unscramble the words to create a sentence.
- Feedback and discuss. Ask students to write the booklet.
- At the end of the lesson emphasise that developing good characteristics makes a good person and how such traits can help on the way to achieving success.

Lesson Two:

- Starter: recap on last session’s key words, particularly motivation, drive and resilience. This can be done by using the educational online quiz, ‘Kahoot.’ The intent of this will be to embed knowledge from the previous lesson whilst creating a fun and stimulating beginning to the lesson.
- Ask students what the words motivation, drive and resilience mean. Ask students to record the meanings in their booklets (the definitions are in the booklet if they need to refer back to them).
- How would you measure your progress in your current D&T project?
- Ask students to complete the star diagram, giving them time to self – reflect on their personal progress in their current D&T subject.
- Show students the video: Steve Jobs
- In groups ask the pupils what characteristics Steve Jobs displayed during his most challenging years. Encourage discussion further by asking them, ‘What motivated him?’ (The intended aim of this activity is to get pupils to start noticing traits in people and for them to see how the characteristics Steve Jobs possessed helped steer him to success).
- Ask students to share and discuss in small groups the things that motivate them.
- Using the space in their booklets ask the students to record their goals and aspirations. They can do this in different ways e.g. mind map, mood board.
• Ask the students to pick one of their aspirations, recording it in the space provided in their worksheets.
• In groups allow them to discuss how they will achieve this goal, considering character traits they may need to develop on.
• Plenary: How could you apply what you have learnt in today’s lesson in your future? At this stage pupil should start to think about applying their knowledge in real life situations.

Lesson Three:
• Display the quote ‘I never lose, I either win or I learn’.
• Question students – what do you think it means?
  Have you ever failed at something before?
• Show students the video: Failure: The Secret to Success – A Honda Documentary.
• After watching the video question the students.
• How can failure result in success? Ask students in small groups to discuss examples from the video. Ask them to think about what helped the people overcome the challenges they faced and lead them towards success.
• Feedback.
• Introduce ‘The Marshmallow Challenge’.
• Within 18 minutes, in small teams students must build the tallest freestanding structure out of one metre of tape, one metre of string and one marshmallow. The marshmallow must be at the top.
• Plenary: Ask the students to reflect on their performance.
• Do you think you were successful?
• How did this make you feel?
• Did you encounter any problems?
• How did you overcome them?
• What characteristics did you need?
• Ask pupils to complete the star diagram to measure their progress under the headings drive, motivation and resilience. Ask them to consider ‘what went well’ and ‘even better if’.
• Final reflection: Look back at the quote from the beginning of the lesson, ‘I never lose, I either win or I learn’.
• Ask students what they think it means. Do you look at it differently?
Lesson Four:
- Starter: Display the quotes from Steve Jobs, Soichiro Honda and Charlotte Forbes (one of our past pupils that you may want to replace for one of yours).
- Ask students to pick their favourite quote and give reasons for their choice.
- Feedback.
- Ask students to think about the character traits we have discussed over the past sessions.
- Ask them how they can be applied to their own project work. Students can share examples.
- Ask students what they hope to achieve today. At this stage their response should have reference to the character traits we have discussed and link to their aims or goals. Ask them to write down three targets.
- Issue each student with three ‘character cards’, a motivation card, a drive card and a resilience card.
- Explain to students that they are to award ‘character cards’ to their peers in recognition of their achievements in the three areas. Whilst they are completing their project work they are to notice pupils that are displaying the characteristics. Students are to use the space on the card to give a reason and sign.
- Sentence starters are provided to support pupils with this task.
- Teacher to follow same process and award cards to students.
- Before students start work ask them what the word conscientious means. Discuss how they can apply this character trait to the task. Why is it important to carry out the task conscientiously?
- Plenary: Review and reflection. Ask to look back at the targets they set themselves for today’s lesson. Did you achieve your targets? Pupils to complete the star diagram to review their progress under the headings drive, motivation and resilience.
- Feedback. Give pupils the opportunity to discuss their achievements / celebrate their successes. At this stage you could ask pupils to share the comments on the ‘character cards’ they have been awarded. Also teacher can share the things they noticed and their reasons for awarding ‘character cards to others.
- Final thought. Refer back to the three character traits. Ask students to look out for the traits outside of the classroom. Tell them that we will review findings at the start of the next session.
Lesson Five:
- Display the words motivation, drive and resilience. Have you recognised any of these traits outside of the classroom? Invite students to share examples.
- At this point teacher could share examples they have found. This may need to be updated to keep it current.
- Examples include Nadia from ‘Bake Off’. How did Nadia display the character traits?
- A video of the New Zealand all Blacks. How do they display the character traits?
- New Zealand’s win rate over the last 100 years is over 75%. What character traits do they possess that make them successful?
- Ask students to look back at the mood board they created in session two where they recorded down their future goals and aspirations.
- Upon reflection can you explain how you would recognise when you need to apply the character traits you have developed?
- How will you achieve personal success?
- Plenary: Celebration. Ask students to stand in a circle to share their achievements and goals. These can be in this subject and elsewhere. Have an object called a ‘talking piece’ that gets passed round and only when the student is in possession of the ‘talking piece’ can they speak. Encourage students to be respectful to others during the task. They could devise a list of rules before they start.
- Final thought: Display quote, ‘If you have motivation, drive and resilience nothing is impossible’. In this case the quote is from the teacher, this can be changed to suit.
- Final thought. Display the image of the butterfly.
- Ask students if they can apply the story of the Hungry Caterpillar to what they have learnt.

Notes on Differentiation and Adaptability

Lesson One: Keywords could be changed to suit different abilities or ages groups.

Lesson Two: The ‘future aspirations’ task could be adapted to suit different learning styles, students could produce either a mood board or mind map.

Lesson Three: The ‘marshmallow challenge’ can be adapted by changing the materials or tools given to do the task. The
quantity or strength of materials. They could be allowed more time. A weight could be added to increase the level of challenge.

Lesson Four: The prompts could be taken away or keywords could be added to support learners.

Lesson Five: Stretch and challenge with use of questioning.

| Other Points Worth Noting | Homework – opportunity for pupils to focus on recognising traits outside school about themselves and others. |