Mathematical challenges for able pupils

Year 3 C Handling data and measures
Jed and Jake are pirates. Between them they have three precious jewels: a ruby (R), a diamond (D) and an emerald (E). Complete the table. Show what jewels each pirate could have.

<table>
<thead>
<tr>
<th></th>
<th>Jed</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jake</td>
<td></td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Learning Objective:
- Solve a given problem by organising and interpreting data in a simple table.
- Explain methods and reasoning.
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- Solve a given problem by organising and interpreting data in a simple table.
- Explain methods and reasoning.
Nick-names

Dawn, Mark, Josh and Tina are friends. They each have a nick-name. Their nick-names are Spider, Curly, Ace and Fudgy, but not in that order.

What is the nick-name of each of the friends?

Clues

• Josh plays tennis with Curly and goes swimming with Ace.
• Tina has been on holiday with Curly but travels to school with Fudgy.
• Spider, Curly and Dawn play in the football team.
• Spider sometimes goes to tea with Josh.

Learning Objective:

• Solve mathematical problems or puzzles.
• Solve a problem by organising information in a table.
• Explain methods and reasoning.
Solution to nick-names

Dawn is Ace.
Mark is Curly.
Josh is Fudgy.
Tina is Spider.

Learning Objective:
• Solve mathematical problems or puzzles.
• Solve a problem by organising information in a table.
• Explain methods and reasoning.
King Arnold

King Arnold sits at a Round Table.

There are 3 empty seats.

In how many different ways can 3 knights sit in them?

Learning Objective:
• Solve mathematical problems or puzzles.
• Solve a problem by organising information.
• Explain methods and reasoning.
King Arnold sits at a Round Table.

There are 4 empty seats.

In how many different ways can 4 knights sit in them?

Learning Objective:
- Solve mathematical problems or puzzles.
- Solve a problem by organising information.
- Explain methods and reasoning.
Three knights can sit with King Arnold in **6 different ways**.

Four knights can sit with King Arnold in **24 different ways**.

**Learning Objective:**
- Solve mathematical problems or puzzles.
- Solve a problem by organising information.
- Explain methods and reasoning.
The end, thank you!
Thank You

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These units were organised using advice given at:


References and additional resources.

The questions from this PowerPoint came from:
Mathematical challenges for able pupils in Key Stages 1 and 2
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