EO M240.02 – INVENT A SPACE TECHNOLOGY ITEM

1. **Performance**: Invent a Space Technology Item

2. **Conditions**:

   a. Given:

      (1) Consumable items for construction;

      (2) Supervision; and

      (3) Assistance as required.

   b. Denied: N/A.

   c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.

3. **Standard**: In accordance with Goodman, P., *Arty Facts: Space and Art Activities*, Crabtree Publishing, and in groups of no more than four, the cadet shall invent a space technology item, to include:

   a. brainstorming ideas about the invention;

   b. designing the idea on paper; and

   c. constructing the item out of consumable items.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain that there are many challenges astronauts encounter while in space, such as: a. transportation to and from space; and b. the living environment.	Interactive Lecture	5 min	C3-040 (p. 36)
TP2	Conduct an activity where cadets invent and construct a space technology item.	In-Class Activity	35 min	
TP3	Conduct a group discussion where cadets share their space technology item with the entire group.	Group Discussion	15 min	

5. **Time**:

   a. Introduction / Conclusion: 5 min

   b. Interactive Lecture: 5 min

   c. In-Class Activity: 35 min

   d. Group Discussion: 15 min

   e. Total: 60 min

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6. **Substantiation**:

   a. An interactive lecture was chosen for TP1 to orient the cadets to space technology and to give an overview of it.

   b. An in-class activity was chosen for TP2 as it is an interactive way to provoke thought and stimulate interest among cadets.

   c. A group discussion was chosen for TP3 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about space technology.

7. **References**: C3-040 (ISBN 0-7787-1140-4) Goodman, P. (2002). *Arty Facts: Space and Art Activities.* St. Catharines, ON. Crabtree Publishing.

8. **Training Aids**: Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids**: Consumable items for construction.

10. **Test Details**: N/A.

11. **Remarks**: N/A.

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