FACILITATOR

Job Description:

- **Make sure group starts quickly and remains focused during the entire activity.**
  - **Good tools/phrases to use:**
    - Assign tasks for collecting and distributing materials as needed.
    - Assign roles like calculator or significant figure checker.
    - “I think we have everything, are we ready to begin?”

- **Takes care of time management.**
  - **Good tools/phrases to use:**
    - Keep an eye on the clock.
    - Keep group moving forward.
    - Communicate with group on discussion deadlines.
    - “I think we need to focus on _______ now in order to complete this section of the activity *on time.*”
    - “We have _____ minutes before we need to be ready to discuss this section. Let’s get this done.”

- **Make sure all voices in the group are heard.**
  - **Good tools/phrases to use:**
    - Address group members by name.
    - Ensure *every* group member contributes.
    - Assign different members to read sections of activity on a rotating basis.
    - “(Name), what do you think about . . . ?”
    - “I would like to hear what you think, (name).”
<table>
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<tr>
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<th>PERIOD</th>
<th>ELEMENT</th>
<th>_ATOMIC NUMBER</th>
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(1) Periodic group is shown with the appropriate figure. For elements known to exist and to the value evaluated in brackets indicates the relative number of the longest-lived isotope of the element. The actinide elements (Ac, Lr) do not have a characteristic chemical symbol composition, useful in those atomic weight is tabulated.

Editor: Aditya Vardhan (adivar@nettlinx.com)
SPOKESPERSON

Job Description:

• Communicates group questions and clarifications with the teacher or other groups. (This is the only group member designated to do so.)
  ➢ Good tools/phrases to use:
    ▪ “Our group is confused about how _____ relates to ______.”
    ▪ “Our group reached consensus that the answer to number _____ was ______.”

• Ensures all group members have had the opportunity to respond to the question before asking outside sources.
  ➢ Good tools/phrases to use:
    ▪ “Does anyone in our group know the answer to _______?”
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• Ensures that everyone in the group agrees on what question to ask if an outside source is needed.
  ➢ Good tools/phrases to use:
    ▪ “Does everyone agree we need to find out . . . ?”

• Presents conclusions of the group to the class, as requested.
  ➢ Good tools/phrases to use:
    ▪ “The reasoning we used to answer number _____ was . . . ”

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Facilitator
- The group begins promptly.
- The group stays on task, progressing through the activity in a timely fashion.
- All members of the group are participating.

Spokesperson
- Seeks group input before consulting teacher or other groups.
- All group members feel satisfied that their issues have been addressed.
- Articulates questions and responses well.

Quality Control
- Any individual sample collected should accurately demonstrate the groups’ understanding.
- Regularly checks that group members’ answers are consistent (not necessarily identical).
- Encourages individuals to make sure answers are thorough (i.e. showing work).

Process Analyst
- Analyst reports to group regarding group performance at least one time during the activity as well as at the end.
- Analyst provides insightful and positive feedback on how the group is working.
- Analyst completes the process questions report form if directed.

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Job Description:

• **Guides consensus-building process; group must agree on responses to questions.**
  ➢ Good tools/phrases to use:
    ▪ “Would you all agree that _____ is an acceptable answer for question number _____?”
    ▪ “Could you please rephrase what you just said?”
    ▪ “Is your response/answer completely supported by your explanation/calculations?”
    ▪ “Would that response make sense to someone from another group?”

• **Verifies that ALL individual responses are: 1) consistent on paper, 2) reflect the group’s consensus, and 3) are high quality.**
  ➢ Good tools/phrases to use:
    ▪ Look at responses from individual papers (sampling!).
    ▪ Have all group members shown work on quantitative problems?
    ▪ Do all group members’ responses have complete thoughts or explanations?

• **Ensures that accurate revisions happen after class discussions.**
  ➢ Good tools/phrases to use:
    ▪ Can all group members respond correctly to a question about what you learned?
    ▪ “(Name) when you read (name’s) answer, do you see any differences?”

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Process Skills

Personal Skills
- Judging own progress in learning (i.e. Concepts, techniques and skills)
- Accepting peer review

Critical Thinking
- Visualizing
- Building analogies
- Identifying similarities / differences
- Summarizing
- Defining rules
- Drawing conclusions

Communication
- Articulating an idea
  - Expresses concepts, definitions and explanations in grammatically correct sentences
  - Verbally expresses ideas to group members during activity
- Defining purpose
- Rephrasing
  - Develop concept in own words
- Writing with technical detail
  - Express concepts, definitions, and explanations using scientifically correct language.
- Contributions to group discussion

Management
- Managing time
- Utilizing resources effectively – both people and materials

Information Processing
- Observing / recognizing
- Listening
- Predicting
- Reading
- Interpreting graphs / models

Problem Solving
- Persisting / taking risks
- Identifying key issues
- Identifying assumptions
- Applying prior knowledge
- Understanding context

Teamwork
- Respecting everyone’s opinions
- Forming shared understanding
- Compromising/Cooperating
- Building consensus
- Sharing ideas
- Including all group members

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PROCESS ANALYST

Job Description:

• **Observes group dynamics and behavior with respect to the learning process, using report format.**
  
  - **Good tools/phrases to use:**
    
    - Is everyone in the group participating?
    - Are group members listening carefully to each other?
    - Are group members being patient and respectful of each other?
    - Fill out the report form that may be collected for the activity.

• **Reports to the group periodically during the activity on how the group performs.**
  
  - **Good tools/phrases to use:**
    
    - “Let’s stop for a minute. I have a couple comments on what we are doing well and a suggestion on how we could be more productive.”
    - “Let’s wait for (name) to catch up before we move on.”

• **Be ready to report to the entire class about how well the group is operating.**
Process Analyst Report Form

1. Use of Time

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<tr>
<th>Socializing</th>
<th>On Task</th>
</tr>
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2. Which three process skills (from the list) did your group do particularly well?

3. What process skill(s) need improvement? Explain.

4. What frustrated your group most today?

5. Team Effectiveness

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<th>We Rocked!</th>
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