

Brainstorming and Mind Maps

Level 6 | Lesson 2

Terminal and Enabling Learning Outcomes covered in the Lesson

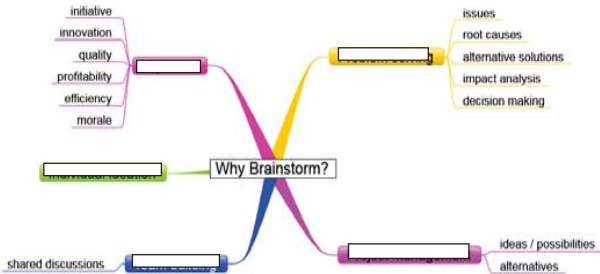

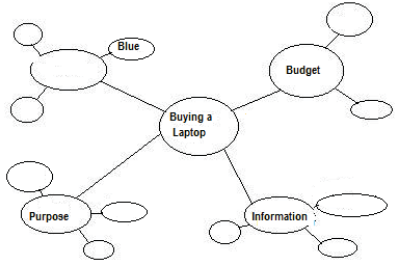
Themes	Terminal Learning Outcomes	Enabling Learning Outcomes	Bloom's Level
Thinking Skills	Conduct a brainstorming session and list ideas resulting from it.	Describe the different aspects of a brainstorming session.	Understanding
		Sequence the steps of brainstorming session.	Applying
		Conduct a brainstorming session to generate ideas on a given topic.	Applying
		Examine whether the brainstorming session is conducted as per the rules.	Applying
	List the common features among the ideas and categorize under appropriate label.	List the common features among the ideas and categorize under appropriate label.	Analysing
	Draw mind maps to show the links between main topic, categories and subcategories.	Categorize the data on the basis of given condition.	Analysing
		Draw a mind map on a given topic.	Applying
	Update the mind map based on the analysis and decision making process.	Update the mind map based on the analysis and decision making process.	Applying

Question Bank Level 6 Lesson 2

Bloom's Level	Corresponding LO	Difficulty Level (Easy/Difficult)	Objective/S objective	Type of Question	Question	Solution
Understanding	Describe the different aspects of a brainstorming session.	Easy	Subjective	Short	1. What are the main steps involved in a brainstorming session?	1. A group of people sit together and think about a given topic 2. Each person share his or idea with the group. 3. All the generated ideas or solution are noted down.
Understanding	Describe the different aspects of a brainstorming session.	Easy	Objective	Short	2. Write True or False. i. Brainstorming is a technique for generating ideas. ii. In a brainstorming session people/participants individually think about a given topic. iii. During brainstorming the ideas, knowledge and questions from each person are discussed on their merits. iv. The purpose of a brainstorming session is to generate a thorough list of solutions.	i. True ii. False iii. False iv. True
Understanding	Describe the different aspects of a brainstorming session.	Easy	Objective	Short	3. Fill in the blanks with correct words. i. Brainstorming is a technique for generating _____. ii. Mind map is a _____ representation of the information related to a topic.	i. Brainstorming is a technique for generating <u>ideas</u> . ii. Mind map is a <u>visual</u> representation of the information related to a topic.
Understanding	Describe the different aspects of a brainstorming session.	Easy	Subjective	Long	4. Narrate one situation where brainstorming can be used to solve a problem.	
Applying	Sequence the steps of brainstorming session.	Difficult	Objective	Short	5. A brainstorming session is conducted by a group of five students Jack, Johnny, Jill, Mary and Donald. Number the steps in sequential order by filling the boxes given below. <input type="checkbox"/> Johnny, Jack, Jill and Mary started to generate ideas. <input type="checkbox"/> Donald gathered the friends and arranged them in semi-circular arrangement. <input type="checkbox"/> As the board was filled with ideas and they could not think of any more, they decided to end the session. <input type="checkbox"/> He volunteered to conduct the session and write the ideas generated on the board.	Step 1: Donald gathered the friends and arranged them in semi-circular arrangement. Step 2: He volunteered to conduct the session and write the ideas generated on the board. Step 3: Johnny, Jack, Jill and Mary started to generate ideas. Step 4: Each of them waited till other finish and the idea is noted down on the board. Step 5: As the board was filled with ideas and they could not think of any more, they decided to end the session. Step 6: Donald took few snaps of the board to record the generated ideas.

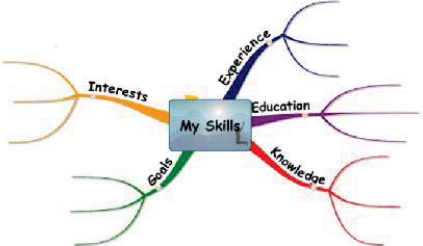
					<input type="checkbox"/> Donald took few snaps of the board to record the generated ideas. <input type="checkbox"/> Each of them waited till other finish and the idea is noted down on the board.	
Applying	Sequence the steps of brainstorming session.	Difficult	Subjective	Long	6. Manu, Amy, Kill, Bipin and Jasmeet are brainstorming to generate ideas on school event “Alternative Energy Resource”. List basic general steps of the brainstorming session that they will follow.	Refer Guidelines for Brainstorming from the textbook.
Applying	Conduct a brainstorming session to generate ideas on a given topic.	Difficult	Subjective	Activity	7. Conduct a brainstorming session at home/class on “Planning a vacation” with at least three to five participants apart from you. List the ideas generated.	
Applying	Conduct a brainstorming session to generate ideas on a given topic.	Difficult	Subjective	Activity	8. Conduct a brainstorming session at home/class on “Role of newspaper in our life” with at least three to five participants apart from you. List the ideas generated.	
Applying	Conduct a brainstorming session to generate ideas on a given topic.	Difficult	Subjective	Activity	9. Conduct a brainstorming session with your classmates “Role of Computers in Education”. The whole class may participate in the brainstorming session. After the session makes groups and categorize the ideas. Each groups will compare or share the categorization with the class. <u>Note to teacher:</u> If the strength of the class is more than 25 then split the class in two groups. Further divide the groups in smaller groups to categorize the ideas generated from the brainstorming session. Also compare the ideas generated by the groups in the brainstorming session.	
Applying	Conduct a brainstorming session to generate ideas on a given topic.	Difficult	Subjective	Activity	10. Conduct a brainstorming session at home/class on “The Ideal Country” with at least three to five participants apart from you.	
Applying	Conduct a brainstorming session to generate ideas on a given topic.	Difficult	Subjective	Activity	11. Conduct a brainstorming session at home/class on “What do you expect from a new Nokia/Apple/Android mobile?” with at least three to five participants apart from you. List the ideas generated.	

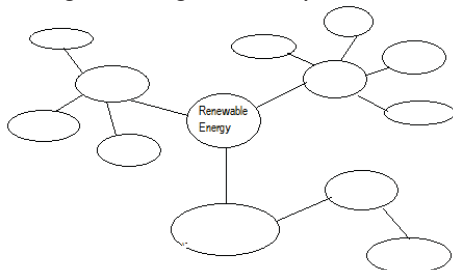
Analyzing	Examine whether the brainstorming session is conducted as per the rules.	Difficult	Objective	Long	<p>12. Sumit, Sonia and Meera are in the middle of a brainstorming session on the concept of Secularism. Identify the guideline that is being followed and one guideline that is not being followed by the group.</p> <p>Sumit: Freedom of choice. Sonia: A principle that demarcates the state from religious institutions. Meera: Democratic. Sonia: Lets first start with the definition! Guideline followed correctly:</p> <hr/> <hr/> <p>Guideline not followed:</p> <hr/> <hr/>	<p>Guidelines not followed: Sonia is interrupting the free flow of the ideas of the group.</p>
Analyzing	Examine whether the brainstorming session is conducted as per the rules.	Difficult	Objective	Long	<p>13. Manu, Amy, Kill, Bipin and Jasmeet are brainstorming to generate ideas on school event “Best out of waste”. Identify the guideline that is being followed and one guideline that is not being followed by the group.</p> <p>Jasmeet: I will note down the ideas on the board. Manu: We have to collect empty boxes of different shapes and sizes. Amy: We may make models of a biosphere. Jill: We may make a model of ecofriendly neighbourhood. Bipin: We may use empty matchboxes for solar panel. Amy: If we are making ecofriendly neighbourhood then we may showcase rainwater harvesting system. Jasmeet: We will use bio-friendly glue</p> <p>Guideline followed correctly:</p> <hr/> <hr/> <p>Guideline not followed:</p> <hr/> <hr/>	<p>The session is conducted as per the guidelines and there is not any irregularity with the session. So all the guidelines are followed here.</p>

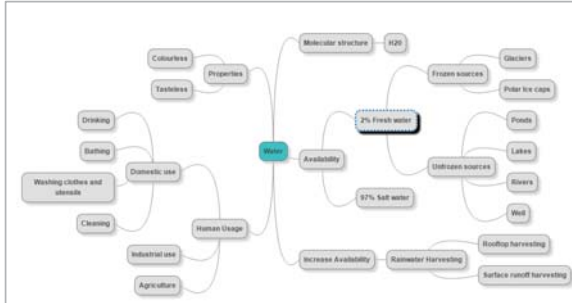
Analysing	Categorize the data on the basis of given condition (10).	Difficult	Objective	Short	<p>14. Fill up the heading for categorization in the given mind map.</p> <p>Improves, Problem Solving, Project Management, Team Building</p> 	
Analysing	Categorize the data on the basis of given condition (10).	Difficult	Objective	Short	<p>15. Fill up the given information and complete the mind map.</p>  <ul style="list-style-type: none"> • Generate reports • Not less than ₹50000 • Red • Colours • Communication via email • Not more than ₹60000 • Wide screen • 4 GB RAM • Black • Making presentation • 10-12 hrs battery life 	<p>Categorization of the given information</p> <p>Budget:</p> <ul style="list-style-type: none"> • Not less than ₹50000 • Not more than ₹60000 <p>Information:</p> <ul style="list-style-type: none"> • Wide screen • 4 GB RAM • 10-12 hrs battery life <p>Purpose:</p> <ul style="list-style-type: none"> • Generate reports • Communication via email • Making presentation <p>Colours:</p> <ul style="list-style-type: none"> • Red • Black

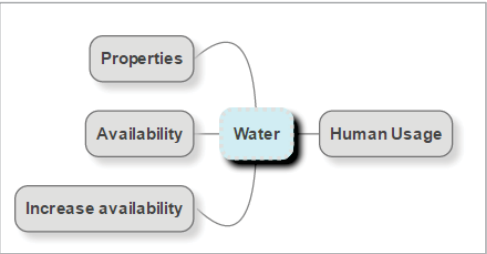
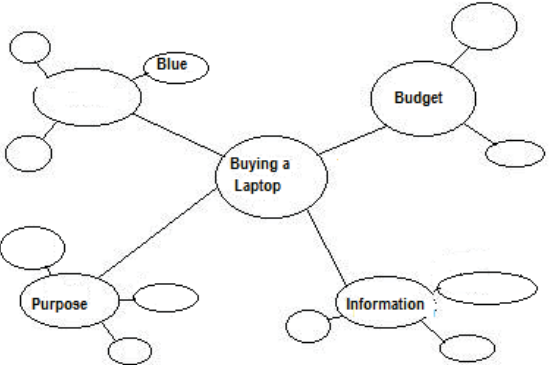
					16. Gather information on 'Human Body' following the steps of gathering information. Categorize the information appropriately.	
Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Subjective	Long	17. Take the list of the generated ideas from a brainstorming session and categorize it under appropriate label.	
Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	18. Categorize the similar items by ticking options and specify the criteria. <input type="checkbox"/> Tap root <input type="checkbox"/> Pollen <input type="checkbox"/> Petals <input type="checkbox"/> Sepal Criteria: _____	Pollen, Petals and Sepal are parts of flower whereas Tap root is a part of roots.
Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	19. Categorize the similar items by ticking options and specify the criteria. <input type="checkbox"/> Oman <input type="checkbox"/> Bangkok <input type="checkbox"/> Libya <input type="checkbox"/> Bhutan <input type="checkbox"/> Afghanistan <input type="checkbox"/> Russia <input type="checkbox"/> India Criteria: _____	Oman, Bangkok, Bhutan, Afghanistan and India are Asian countries whereas Libya is an African country and Russia is a European country.
Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	20. Categorize the similar items by ticking options and specify the criteria. Antartic circle <input type="checkbox"/> Latitudes <input type="checkbox"/> Antartica <input type="checkbox"/> Prime Meridian <input type="checkbox"/> North pole <input type="checkbox"/> Equator <input type="checkbox"/> Europe Criteria: _____	Antarctic Circle, Latitudes, Prime Meridian, North Pole, Equator and imaginary lines on the earth's surface whereas Antarctica and Europe are two continents on Earth.

Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	21. Categorize the similar items by ticking options and specify the criteria. <ul style="list-style-type: none"> <input type="checkbox"/> Adjectives <input type="checkbox"/> Prepositions <input type="checkbox"/> Noun <input type="checkbox"/> Conjunctions <input type="checkbox"/> Pronoun <input type="checkbox"/> Verb <input type="checkbox"/> Adverb Criteria: _____	Categorization based on Parts of Speech; Preposition and Conjunctions are not one of the Parts of Speech.
Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	22. Categorize the similar items by ticking options and specify the criteria. <ul style="list-style-type: none"> <input type="checkbox"/> XI <input type="checkbox"/> XXIII <input type="checkbox"/> XXI <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> XIX <input type="checkbox"/> XIV <input type="checkbox"/> XVII Criteria: _____	Prime Nos. – XI, XXIII, II, III, XIX; whereas rest of the numbers are not Prime.
Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	23. Categorize the similar items by ticking options and specify the criteria. <ul style="list-style-type: none"> <input type="checkbox"/> Tropical Evergreen forest <input type="checkbox"/> Sunderbans in West Bengal <input type="checkbox"/> Tropical Deciduous forest <input type="checkbox"/> Thorny bushes <input type="checkbox"/> Mountain vegetation <input type="checkbox"/> Mangrove forest <input type="checkbox"/> Birch, Fir and Maple Criteria: _____	Sunderbans in West Bengal and Birch, Fir and Maple are names of trees; whereas the rest are types of forest

Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	24. Categorize the similar items by ticking options and specify the criteria. <ul style="list-style-type: none"> <input type="checkbox"/> Google <input type="checkbox"/> Bing <input type="checkbox"/> Ask <input type="checkbox"/> Hotmail <input type="checkbox"/> msn <input type="checkbox"/> Gmail <input type="checkbox"/> Yahoo Criteria: _____	Google, Bing, Ask, msn, Yahoo are search engines whereas Hotmail and Gmail are websites that provides e-mailing services
Analysing	List the common features among the ideas and categorize under appropriate label.	Difficult	Objective	Short	25. Categorize the similar items by ticking options and specify the criteria. <ul style="list-style-type: none"> <input type="checkbox"/> Windows <input type="checkbox"/> Ubuntu <input type="checkbox"/> Paint <input type="checkbox"/> Open office <input type="checkbox"/> GCompris <input type="checkbox"/> Scratch Criteria: _____	Windows and Ubuntu are operating systems whereas Paint, OpenOffice, GCompris and Scratch are application software
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Long	26. Create a mind map on your skills by filling in the details. 	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	27. Conduct a brainstorming session at home/class on “Planning a vacation” with at least three to five participants apart from you. List the ideas generated. Convert the above mentioned brainstorming ideas into mind map.	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	28. Conduct a brainstorming session at home/class on “Role of newspaper in our life” with at least three to five participants apart from you. List the ideas generated. Convert the above mentioned brainstorming ideas into mind map.	

Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	29. Conduct a brainstorming session at home/class on “Role of Computer in Education?” with at least three to five participants apart from you. List the ideas generated. Convert the above mentioned brainstorming ideas into mind map.	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	30. Conduct a brainstorming session at home/class on “The Ideal Country” with at least three to five participants apart from you. List the ideas generated. Convert the above mentioned brainstorming ideas into mind map.	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	31. Conduct a brainstorming session at home/class on “What do you expect from a new Nokia/Apple/Android mobile?” with at least three to five participants apart from you. List the ideas generated. Convert the above mentioned brainstorming ideas into mind map.	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	32. Create a mind map of any topic you learnt in Science/Geography/History or any other subject.	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	33. Find some resources on Renewable Energy. Refer to books on web based resources. Apply the steps of gathering information. Fill up the categories in the given mind map. 	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	34. View the video by clicking the link given below and draw a mind map to summarize the content of the video. Video link: https://www.youtube.com/watch?v=uUH8iAanREY Note to the teacher: Make them watch all part II of the video and make a collective mind map covering the contents of both the videos.	
Applying	Draw a mind map on a given topic.	Difficult	Subjective	Lab activity	35. Watch the slide presentation and draw the mind map to summarize the content. Slide link: http://www.slideshare.net/samiranghosh399/animal-cells-and-plant-cells?cid=a9ab0500-fef4-4a8f-a8ae-7e29ce36840b&v=qf1&b=&from_search=2	

Applying			Subjective	Lab activity	<p>36. Part A: Gather information following the steps of gathering information. Categorize the information appropriately.</p> <p>Part B: Create a mind map on “The Human Body”.</p>	
Applying	Update the mind map based on the analysis and decision making process.	Difficult	Objective	Long	<p>37. A mind map is a great way to remember things. Like all matter, water is made up of atoms. Two hydrogen atoms bonded to an oxygen atom form a water molecule. Water has several properties that make it a very unique substance. It is colorless and tasteless. 97 percent of the water on the Earth is salt water and only three percent is fresh water; slightly over two thirds of this is frozen in glaciers and polar ice caps. The remaining unfrozen freshwater is found mainly as groundwater, with only a small fraction present above ground or in the air.</p> <p>Apart from drinking, there are so many activities for which we use water. We use water for drinking, brushing, bathing, washing utensils, washing clothes, toilets, cleaning floor, etc. Do you think, our water requirement is limited to activities like these? We use wheat, rice, pulses, vegetables and many other food items everyday. We know that some of the fibres that we use for making fabric come from plants. Is water not needed to grow these? Water is also used in industries for producing almost all the things that we use. So, we need water not only for our daily activities but also for producing many things.</p> <p>Each of us may be getting water into our homes in different ways. But, finally, all of us get water from the same sources such as ponds, lakes, rivers and wells. But since only a small fraction of water available on the Earth is fit for use of plants, animals and humans, the demand for water is increasing day-by-day. One way of increasing the availability of water is to collect rainwater and store it for later use. Collecting rainwater in this way is called rainwater harvesting. The two techniques of rainwater harvesting are - i) Rooftop rainwater harvesting, ii) Surface runoff harvesting.</p>	<p>i</p>  <p>ii: b. Bathing, river, cooking</p>

					<p>i. Complete the mind map referring to the above passage</p>  <p>ii. Circle the odd one out. Refer the passage above.</p> <ol style="list-style-type: none"> Conservation, rain water harvesting Bathing, river, cooking Rivers, lakes, ponds Washing, cooking, growing plants 	
Applying	Update the mind map based on the analysis and decision making process.	Difficult	Objective	Long	<p>38. Part A: Fill up the given information and complete the mind map.</p>  <ul style="list-style-type: none"> • Generate reports • Not less than 50000 • Red • Available colours • Communication via email • Not more than 60000 • Wide screen • 4 GB RAM 	

					<ul style="list-style-type: none"> • Black • Making presentation • 10-12 hrs battery life <p>Part B: Add the following information in the above mind map and update it/</p> <ul style="list-style-type: none"> • Add two sub category under information – software and hardware • Inbuilt webcam • OS – Windows 8 • MS Office 	
Applying	Update the mind map based on the analysis and decision making process.	Difficult	Objective	Long	<p>39. Part A: View the video by clicking the link given below and draw a mind map to summarize the content of the video. Video link (Parts of plants part I): https://www.youtube.com/watch?v=uUH8iAanREY Part B: Watch all part II of the video and make a collective mind map covering the contents of both the videos. Video link (Parts of plants part II): https://www.youtube.com/watch?v=l6FrqsvVS7k Note to the teacher: <ul style="list-style-type: none"> • Ensure that the students make the first mind map after watching the first video and then update the existing mind map to add the content of the second video. • This may be taken up as group activity. </p>	
Applying	Update the mind map based on the analysis and decision making process.	Difficult	Objective	Long	<p>40. Part A: Watch the slide presentation on Cells of plants and animals and draw the mind map to summarize the content. Slide link: http://www.slideshare.net/samiranghosh399/animal-cells-and-plant-cells?gid=a9ab0500-fef4-4a8f-a8ae-7e29ce36840b&v=qf1&b=&from_search=2 Part B: Watch another video on Cells of plants and animals and update your mind map if required. Video link: https://www.youtube.com/watch?v=MfopLillOeA</p>	

Extra question that does not match any LO

What are the uses of a mind map?

Answer:

- Create a structure of the identified categories and sub categories
- Organize related information under a category
- Visualize and understand the available information at a glance
- Recall additional information
- Identify missing categories and information