#### JAG01 Unit 3 Rocks

#### Task 1 Idioms

# What does it mean when someone says:

Do you *live under a rock*?

The relationship got off to a rocky start.

Prices have reached rock bottom.

### Task 2 Complete the text using the parts of sentences below:

- a) or intrusive, meaning that they cooled beneath Earth's surface
- b) concerning the history of Earth
- c) including composition, texture, structure, and where it is on Earth
- d) we rely heavily for our modern civilisation
- e) from parts of other rocks by deposition or by precipitation from solution in water
- f) into three general types or families
- g) formed by geologic processes

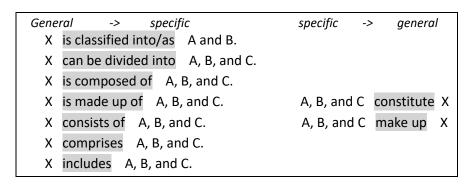
Minerals and rocks are the basic building blocks of the solid Earth and form some of our most basic *resources* on which (1) ...... Minerals and rocks also play an important role in many Earth surface processes, such as landslides, earthquakes, and volcanic activity. Finally, the study of minerals and rocks provides important information (2) ......

(adapted from Rothery, D. A. Geology. A Complete Introduction. McGraw-Hill, 2015.)

# Task 3 Classifying

Use the phrases below to classify rocks and other phenomena.

# Words for classifying into groups and describing composition:



### Task 4 Passive voice

## A) Change these phrases from the active to the passive voice.

Present tense:	You heat the sample. The sample					
Present continuous:	You are heating the sample.					
With a modal verb:	You can heat the sample.					
	You need to heat the sample.					
Past tense:	You heated the sample.					
Present perfect:	You have heated the sample.					
Future:	You will heat the sample.					
D) Transformatio	ner Change the conteness into nessive voice					
<i>'</i>	y matter as solid, liquid and gas.					
	y matter as sond, fiquid and gas as solid, liquid and gas.					
widter	as sond, inquid and gas.					
	ed a considerable force to change the shape of an iron bar.					
A considerable for	rce to change the shape of an iron bar.					
2 If we may west	com on the table it will flow all even the grantees					
_	er on the table, it will flow all over the surface					
11	on the more, it will now all over the surface.					
4. When we heat	ed the crystals, they melted.					
When	, they melted.					
5 Navy that you	have hasted the amount our substance way can see that it softens					
	have heated the amorphous substance, you can see that it softens, you can see that it softens.					
110W that	, you can see that it sortens.					
6. If we pour wat	er from one container to another, we will change the shape of the water mass.					
If we pou	r water from one container to another, the shape					
7 We find metter	r in solid, liquid or gaseous form.					
	•					
wianter	in solid, liquid or gaseous form.					

### Task 5 Video How do crystals work?

https://ed.ted.com/lessons/how-do-crystals-work-graham-baird#watch

### Watch and answer the questions:

How are the atoms generally arranged in crystals? What are the factors influencing the shape of diamonds? Why does glass have a random arrangement of atoms? Why don't some crystals form geometric shapes?

## Watch again, then use the following expressions in sentences:

ions	feldspar	sulphur
DNA	crystalline	bond
hexagon	solidify	unique

### Task 6 The Rock Cycle

# Use the expressions below to sketch and describe the rock cycle.

IGNEOUS	METAMORPHIC	SEDIMENTARY	SEDIMENT	MAGMA
weathering	cooling	heat and pressure	crystallisation	deposition
cementation	melting	solidification	uplift	burial

### Task 7 Video: Rock and Minerals: Identifying Types of Rocks

(https://www.youtube.com/watch?v=tQUe9C40NEE)

Watch and take notes on rock identification. Are there any hard and fast rules?

Watch again and fill in the gaps with one word:

- Sedimentary rocks come from elements of pre-existing rocks, either actual ...... or dissolved materials.
  It's oftentimes difficult to ...... the type of rock.
  You have a ....., more compact form in igneous and metamorphic rocks.
- 4. Crystals are a good ...... of igneous rocks.
- 5. Some igneous rocks are very ..... like this basalt.
- 6. You will sometimes see ...... of mineral grain in metamorphic rock.
- 7. There are ..... of fine clay minerals in shale.
- 8. If you put a little drop of ...... acid on limestone, you'll get bubbling.