Identifying Rock Types Activity (upper elementary)

Rock Types	Rock Sample Numbers											
I=igneous **S**=sedimentary **M**=metamorphic	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Using above properties determine the Rock Type	I	M	S	S	S	S	I	M	I	M	I	M

Rock Identification in baggies as follows:

1. granite
2. gneiss
3. conglomerate
4. limestone
5. shale
6. sandstone
7. obsidian
8. quartzite
9. diorite
10. slate
11. scoria
12. schist

Rock type	Classification (how formed)	Identifying features		Rock Name
		grain size	**colors**	
Igneous	**Intrusive**: cools slower underground, crystals big enough to see	crystals bigger than small sand grains	black/white or reddish/black/white	granite
			gray/black/white	diorite
	Extrusive: cools quickly above ground, crystals too small to see	crystals too small to see & gas bubble holes	usually black but can be reddish due to oxidation	scoria
		no crystals	usually black	obsidian
Sedimentary	**Clastic:** sediment grains pressed or rock fragments cemented back together	small individual grains	white, tan or reddish	sandstone
		very small grains, can't see them	dark grey to black	shale
		large and small rounded grains	various individual grain colors	conglomerate
	Chemical: dissolved minerals precipitate out of water	very small, usually can't see grains	usually white or tan	limestone
Metamorphic	**Foliated:** rocks become layered due to high heat and pressure	very small, thin layers	light grey or black	slate
		very small with thicker layers	alternating layers with different colors	gneiss (nice)
		flattened layers that sparkle	usually light white/silver or dark black/green	schist
	Nonfoliated: rocks are heat altered, or chem. reaction	crystal edges blend, together,	white color or pink/purple	quartzite

		usually don't see individual crystals		

KEY: IGNEOUS

Rock Name & Number	Identifying Features		Sub - Classification
	Color	Grain size	
Granite (1)	pink/ black/ white or black/ white	crystals bigger than small sand grains	**Intrusive Igneous**: cools slower underground, crystals big enough to see
Diorite (9)	black/ white	crystals bigger than small sand grains	**Intrusive Igneous**: cools slower underground, crystals big enough to see
Scoria (11)	usually black but can be reddish if oxides	crystals too small to see & gas bubble holes	**Extrusive Igneous:** cools quickly above ground, crystals too small to see
Obsidian (7)	usually shiny black	no crystals	**Extrusive Igneous:** cools quickly above ground, crystals too small to see

KEY: Metamorphic

Rock Name & Number	Identifying Features		Sub - Classification
	Color	Grain size	
Slate (10)	**light gray** or black	very small, thin layers	**Foliated Metamorphic:** rocks become layered due to high heat and pressure
Gneiss (nice) (2)	alternating layers with different colors	very small with thicker layers	**Foliated Metamorphic:** rocks become layered due to high heat and pressure
Schist (12)	usually light **white/silver** or dark black/green	flattened layers that **sparkle**	**Foliated Metamorphic:** rocks become layered due to high heat and pressure
Quartzite (8)	white color or **pink/purple**	crystal edges blend together, usually don't see individual crystals	**Nonfoliated Metamorphic:** rocks are heat altered, or chem. reaction

KEY: Sedimentary

Rock Name & Number	Identifying Features		Sub - Classification
	Color	Grain size	
Sandstone (6)	**tan**, white or reddish	small individual grains	**Clastic Sedimentary:** sediment grains pressed or rock fragments cemented back together
Shale (5)	**dark gray** to black	very small grains, can't see them	**Clastic Sedimentary:** sediment grains pressed or rock fragments cemented back together
Conglomerate (3)	various individual grain colors	large and small rounded grains	**Clastic Sedimentary:** sediment grains pressed or rock fragments cemented back together
Limestone (4)	usually white, **light grey** or tan	very small, usually can't see grains	**Chemical Sedimentary:** dissolved minerals precipitate out of water

R	O	C	K
Igneous	Quartzite	Shale	Slate
Limestone	Granite	Scoria	FREE
Gneiss	Sedimentary	Obsidian	Schist
Sandstone	Diorite	Metamorphic	Conglomerate

R	O	C	K
Gneiss	Granite	Diorite	FREE
Igneous	Slate	Sandstone	Shale
Limestone	Scoria	Metamorphic	Conglomerate
Quartzite	Sedimentary	Obsidian	Schist

R	O	C	K
Quartzite	Diorite	Shale	FREE
Slate	Sedimentary	Granite	Schist
Igneous	Gneiss	Limestone	Sandstone
Conglomerate	Scoria	Metamorphic	Obsidian

R	O	C	K
Shale	Obsidian	Metamorphic	Scoria
Gneiss	Sedimentary	Diorite	Slate
Conglomerate	Granite	Limestone	FREE
Igneous	Quartzite	Sandstone	Schist

R	O	C	K
Schist	Sedimentary	Diorite	Quartzite
Gneiss	Granite	Conglomerate	FREE
Limestone	Obsidian	Metamorphic	Scoria
Igneous	Shale	Sandstone	Slate

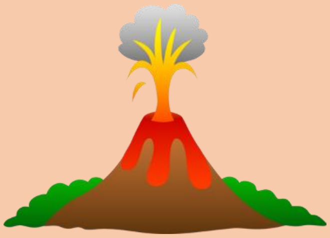
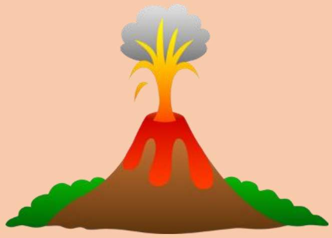
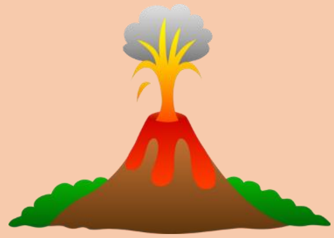
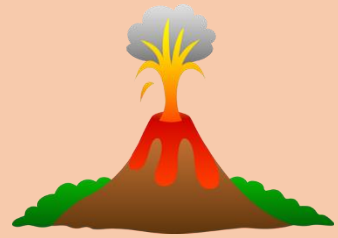
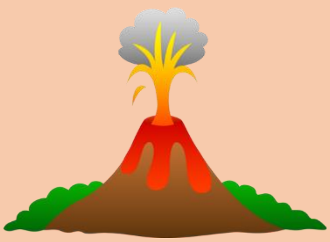
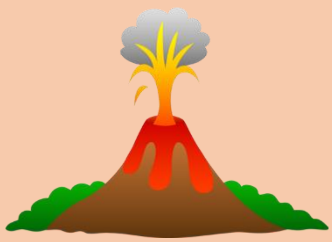
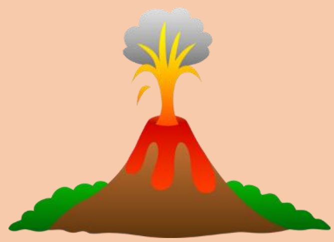
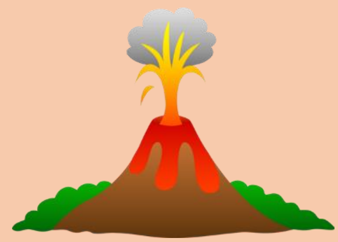
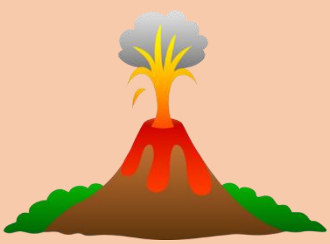
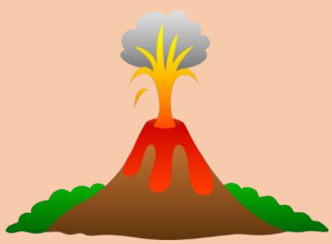
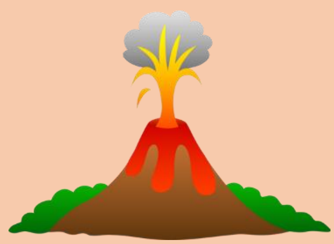
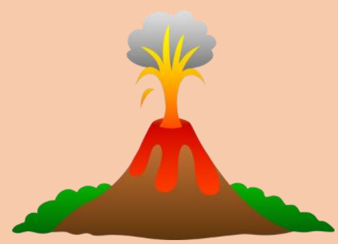
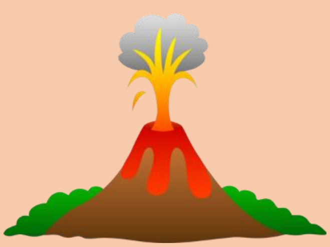
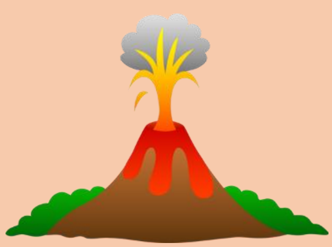
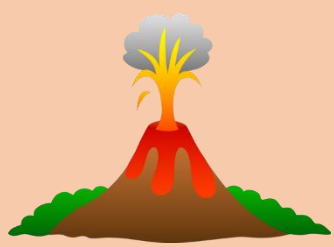
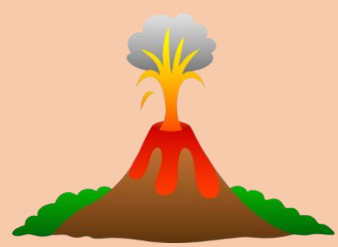
R	O	C	K
Sedimentary	Gneiss	Diorite	Scoria
Granite	Shale	Obsidian	Metamorphic
Quartzite	Igneous	Slate	Sandstone
Schist	Limestone	FREE	Conglomerate

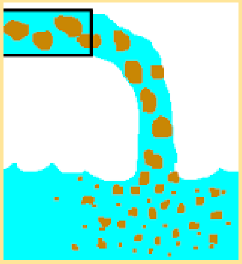
R	O	C	K
Granite	Limestone	Obsidian	Metamorphic
Sedimentary	Quartzite	Slate	Diorite
Gneiss	Conglomerate	FREE	Scoria
Schist	Igneous	Shale	Sandstone

R	O	C	K
Diorite	Sandstone	Conglomerate	Metamorphic
Gneiss	Igneous	Slate	Limestone
Sedimentary	Quartzite	Schist	Scoria
Obsidian	Shale	FREE	Granite

R	O	C	K
Granite	Quartzite	FREE	Diorite
Gneiss	Igneous	Sandstone	Shale
Scoria	Limestone	Conglomerate	Metamorphic
Sedimentary	Slate	Schist	Obsidian

R	O	C	K
Gneiss	Igneous	Shale	Conglomerate
Scoria	Sandstone	Slate	Metamorphic
Obsidian	Schist	FREE	Limestone
Sedimentary	Quartzite	Granite	Diorite

 Igneous	 Igneous	 Igneous	 Igneous
 Igneous	 Igneous	 Igneous	 Igneous
 Igneous	 Igneous	 Igneous	 Igneous
 Igneous	 Igneous	 Igneous	 Igneous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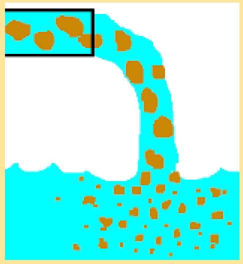
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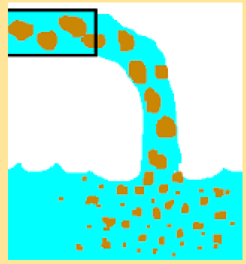
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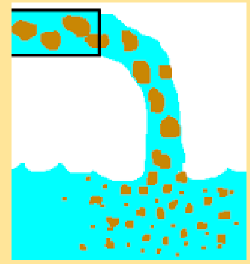
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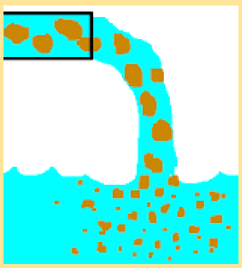
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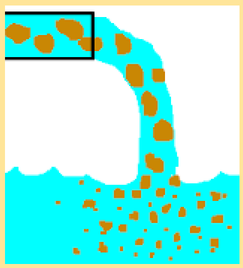
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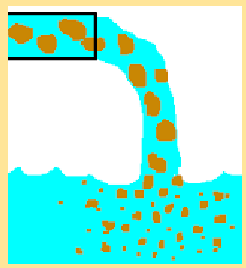
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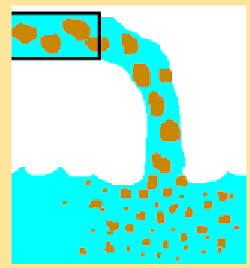
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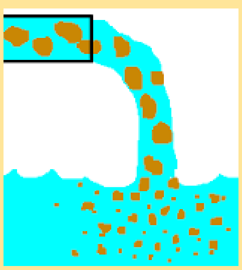
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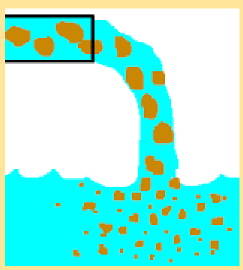
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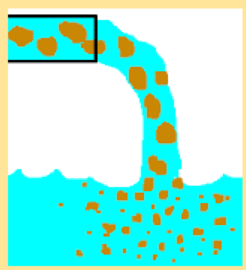
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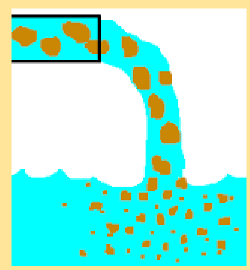
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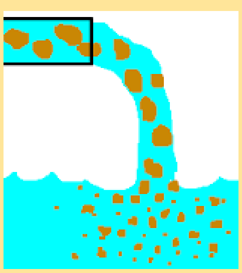
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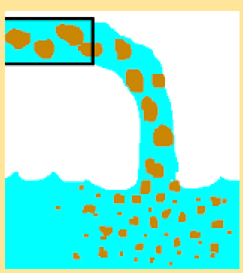
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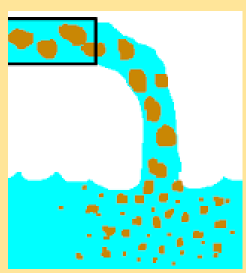
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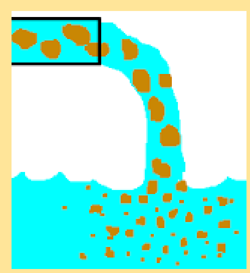
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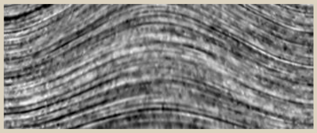
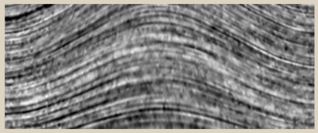
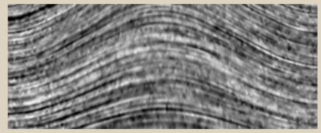
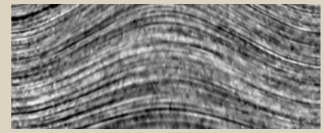
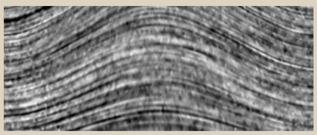
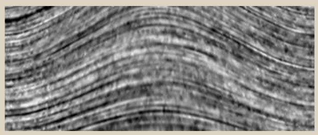
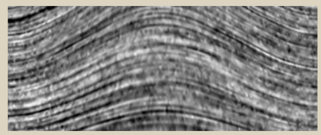
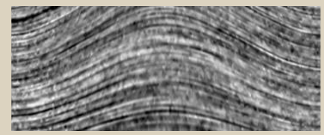
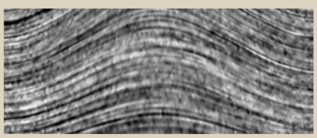
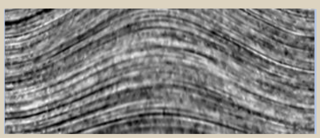
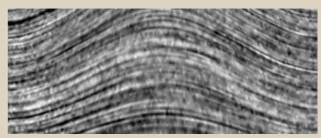
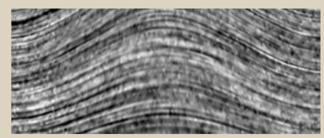
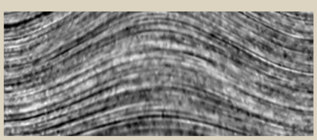
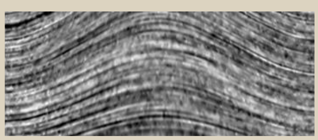
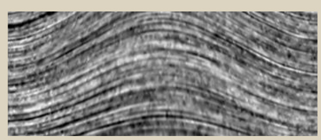
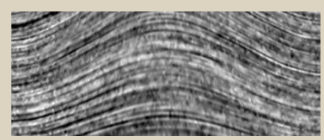
 Metamorphic	 Metamorphic	 Metamorphic	 Metamorphic
 Metamorphic	 Metamorphic	 Metamorphic	 Metamorphic
 Metamorphic	 Metamorphic	 Metamorphic	 Metamorphic
 Metamorphic	 Metamorphic	 Metamorphic	 Metamorphic