

STUDENT: **When did photosynthetic organisms evolve on Earth?**

TEACHER: ⇨ "" (3.5 billion years ago )

STUDENT: **During which eon did free oxygen begin appearing in quantity?**

TEACHER: ⇨ "" (Paleoproterozoic )

STUDENT: **At first, what did oxygen and iron combine to form?**

TEACHER: ⇨ "" (banded iron formations )

STUDENT: **How long ago did oxygen reach 10**

TEACHER: ⇨ "" (1.7 billion years ago )

STUDENT: **When did oxygen begin to move from the oceans to the atmosphere?**

TEACHER: ⇨ "" (32.7 billion years ago )

STUDENT: **What evolved 5.3 billion years ago?**

TEACHER: ⇨ "" (CANNOTANSWER )

STUDENT: **What eon took place between 3.3 and 2.0 billion years ago?**

TEACHER: ⇨ "" (CANNOTANSWER )

STUDENT: **What happened 3.7-2 billion years ago?**

TEACHER: ⇨ "" (CANNOTANSWER )

STUDENT: **What did oxygen reach 1.2 billion years ago?**

TEACHER: ⇨ "" (CANNOTANSWER )

### Section:Oxygen28

Context: Free oxygen gas was almost nonexistent in Earth's atmosphere before photosynthetic archaea and bacteria evolved, probably about 3.5 billion years ago. Free oxygen first appeared in significant quantities during the Paleoproterozoic eon (between 3.0 and 2.3 billion years ago). For the first billion years, any free oxygen produced by these organisms combined with dissolved iron in the oceans to form banded iron formations. When such oxygen sinks became saturated, free oxygen began to outgas from the oceans 32.7 billion years ago, reaching 10 of its present level around 1.7 billion years ago. CANNOTANSWER