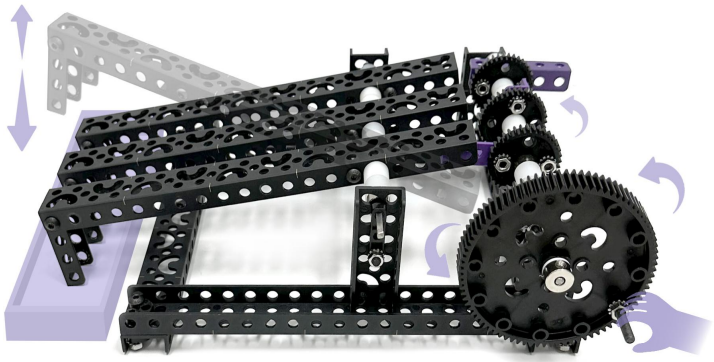
舂米机

课程目标

- 了解凸轮结构特点
- 设计制作一个舂米机模型
- 测试模型，理解凸轮机构的机械运动



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观察思考



稻谷



大米

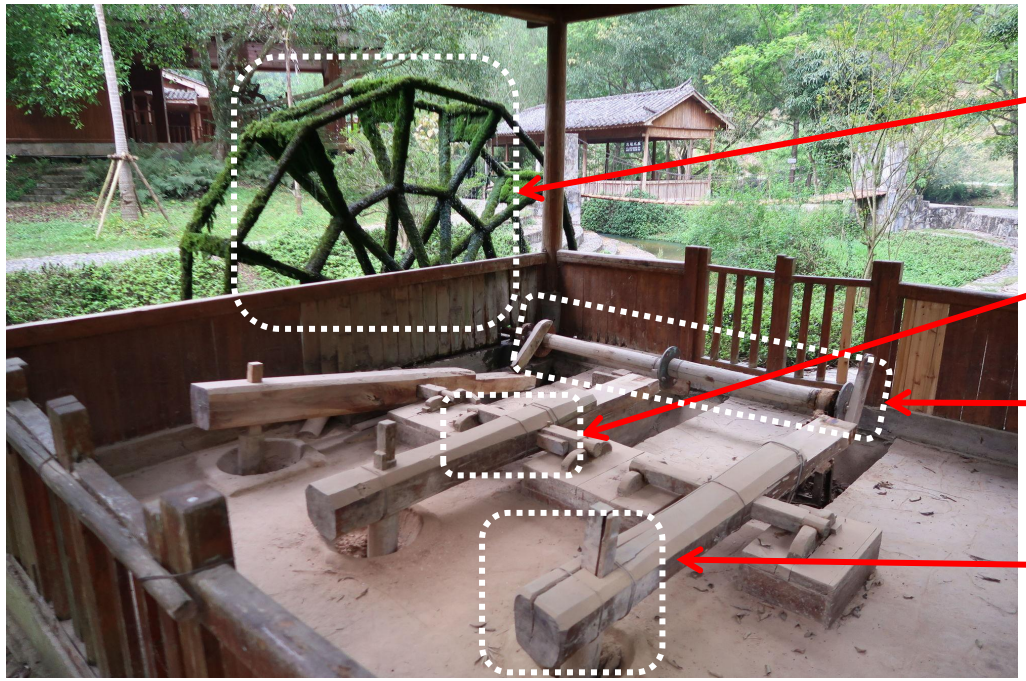
众所周知大米是稻谷褪壳而来，那你知道农民伯伯使用了什么方法来剥离外壳的么？

你有什么好的想法吗？

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观察思考

chōng
舂米机结构分析



动力结构

梁

凸轮机构

舂锤

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动手做

任务

设计制作一个舂米机模型

要求：

1、舂米机有稳定的结构。

2、有能够间歇运动的动力结构。

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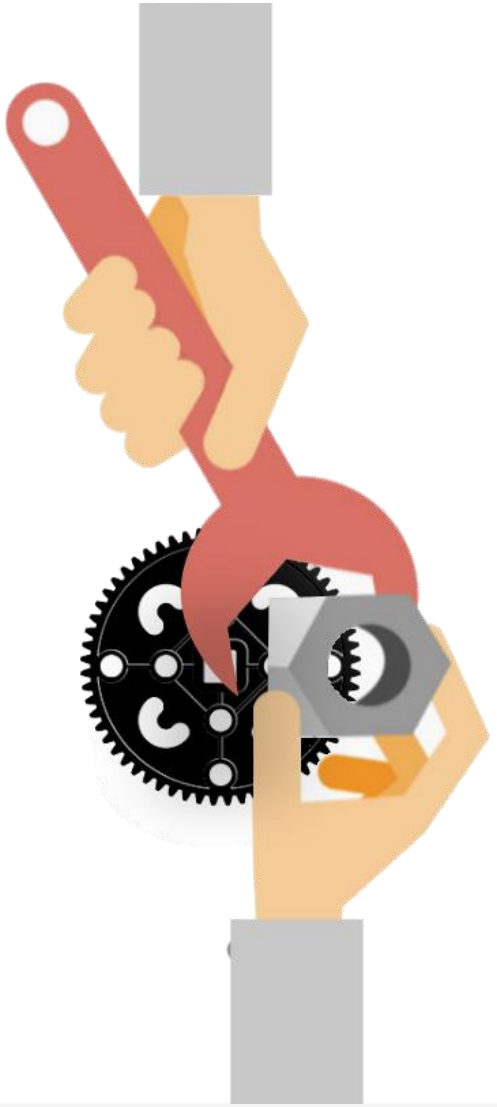
安全提示

（1）请小心使用坚硬、尖锐以及细小的零件。

（2）运行过程中，请勿触碰电机、齿轮等运动部位。

（3）在使用及充电的过程中，请注意用电安全。

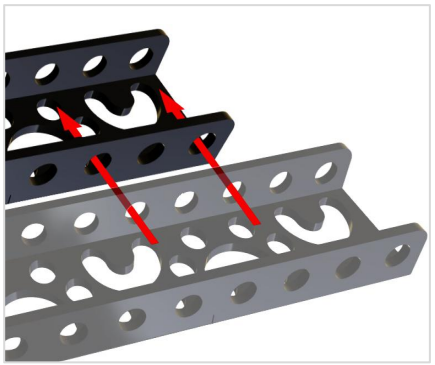




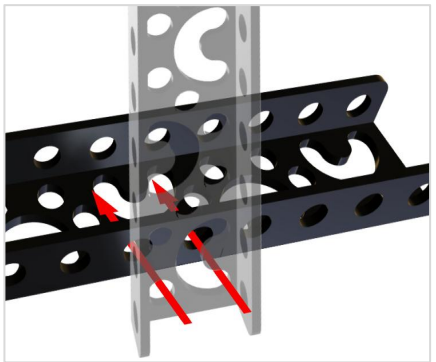
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搭建提示

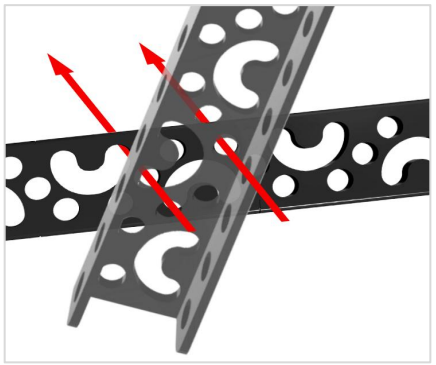
搭建结构的基本方式



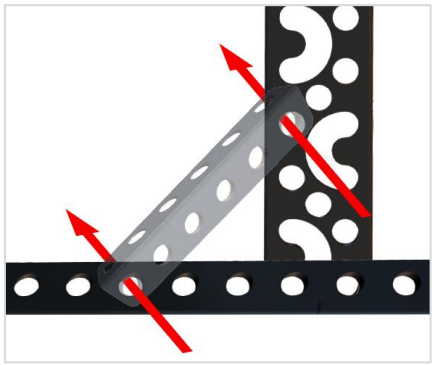
同方向 连接



垂直方向 连接



斜向 连接

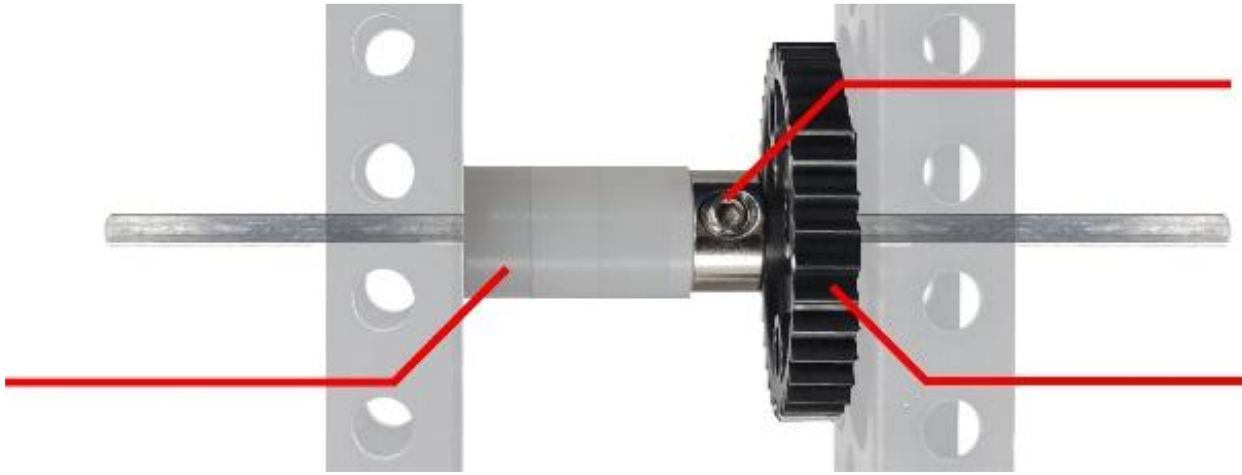


加固 连接

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搭建提示

垫片和细轴杯士的用法



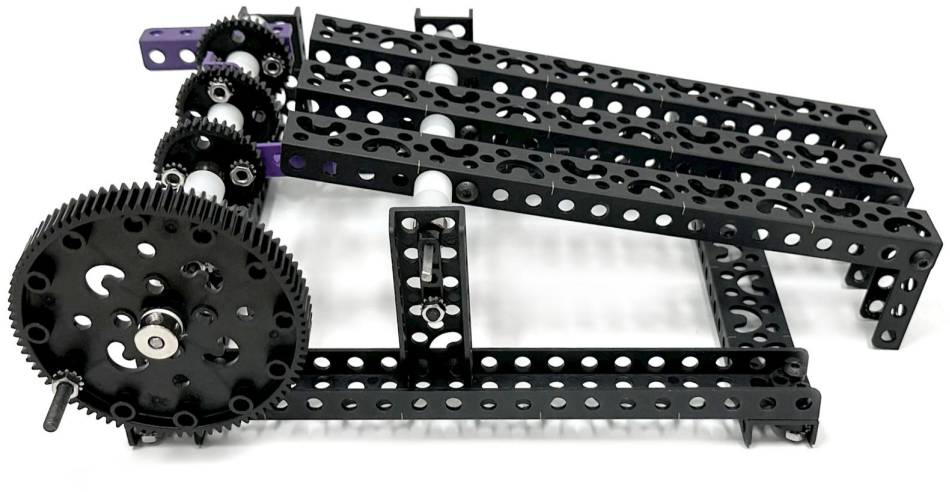
拧紧细轴杯士 上的螺丝，来 **固定** 细轴的位置

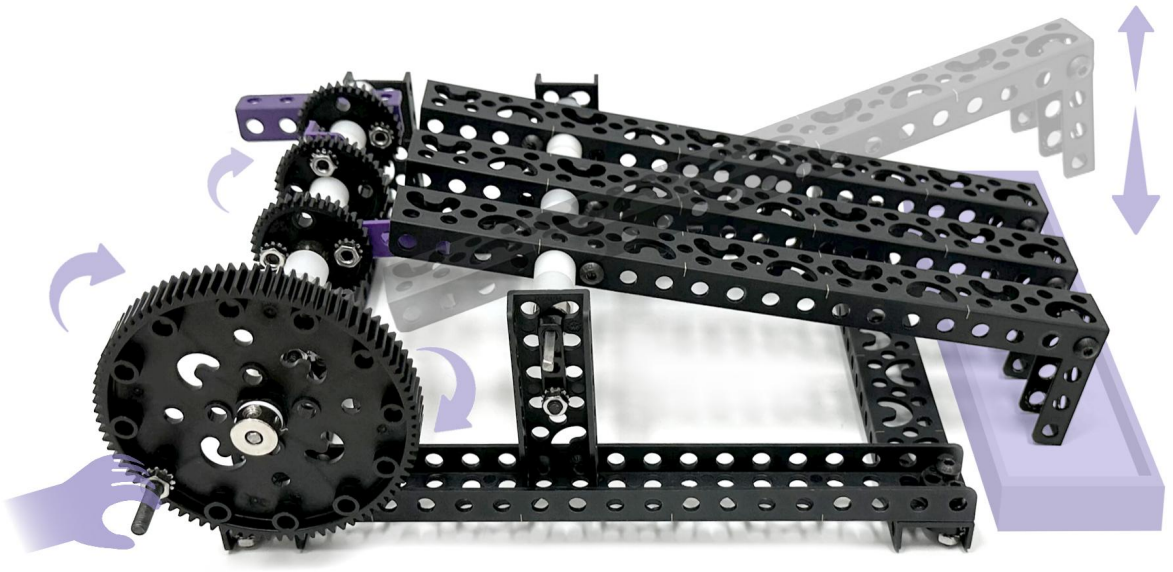
使用 **垫片** 填充 **空隙**，可减少轴的晃动幅度

合理使用垫片和细轴杯士，可使齿轮或车轮 **平稳转动**

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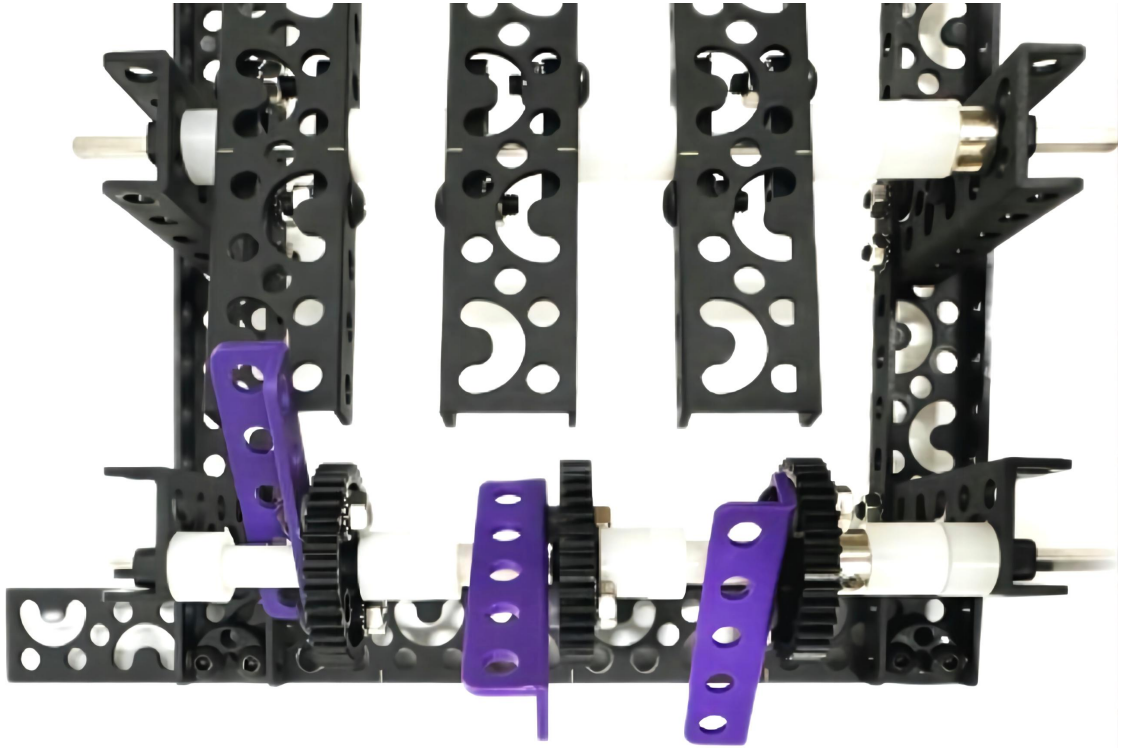
舂米机参考模型





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凸轮机构参考



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动手做

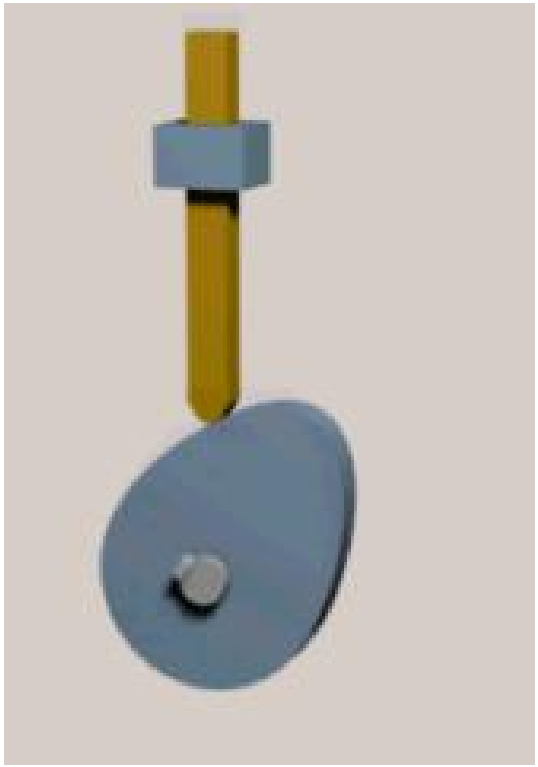
农民伯伯们使用了最新的舂米机，工作很快就要完成啦！





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反思总结



凸轮机构的特点有：

1、结构简单

3、容易产生磨损

3、设计凸轮，可使从动件获得任意预期的运动规律

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反思总结

下列哪些不属于凸轮机构的优点（　　）

A、结构简单　　B、结构紧凑

C、工作可靠　　D、容易变形

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反思总结

下列哪些不属于凸轮机构的优点（　D　）

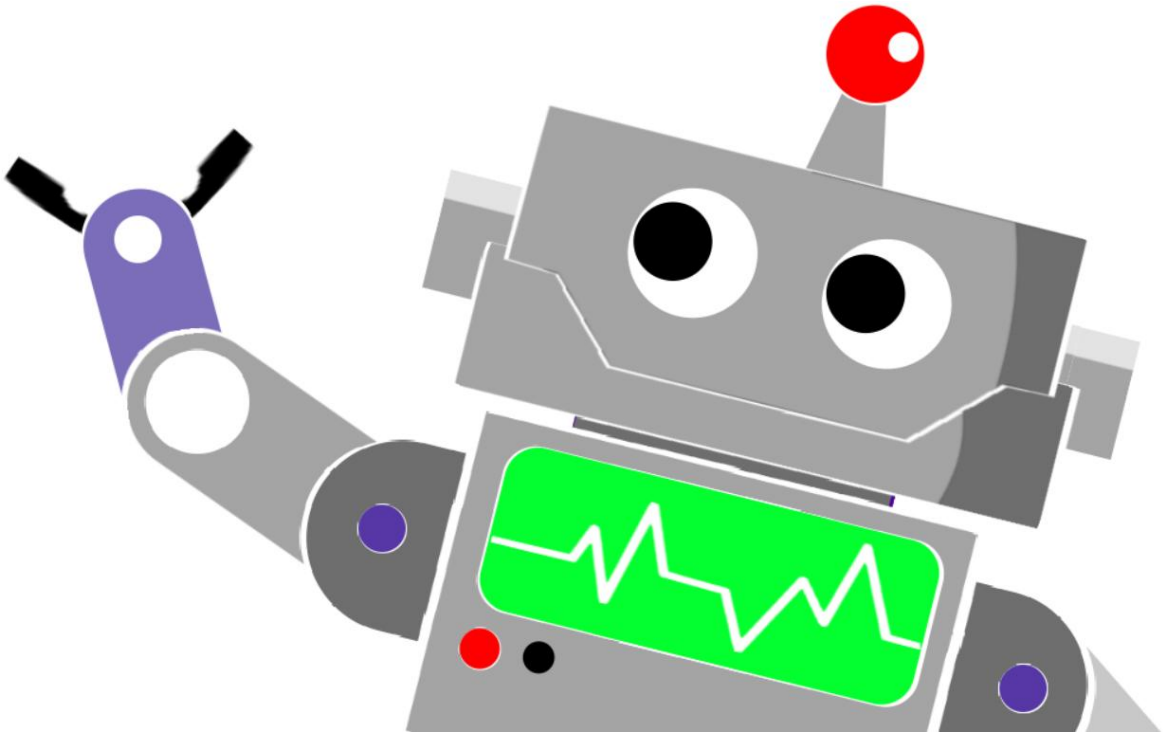
A、结构简单　　B、结构紧凑

C、工作可靠　　D、容易变形

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反思总结

想一想，舂米机是如何实现间歇运动功能的呢？



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反思总结

总结

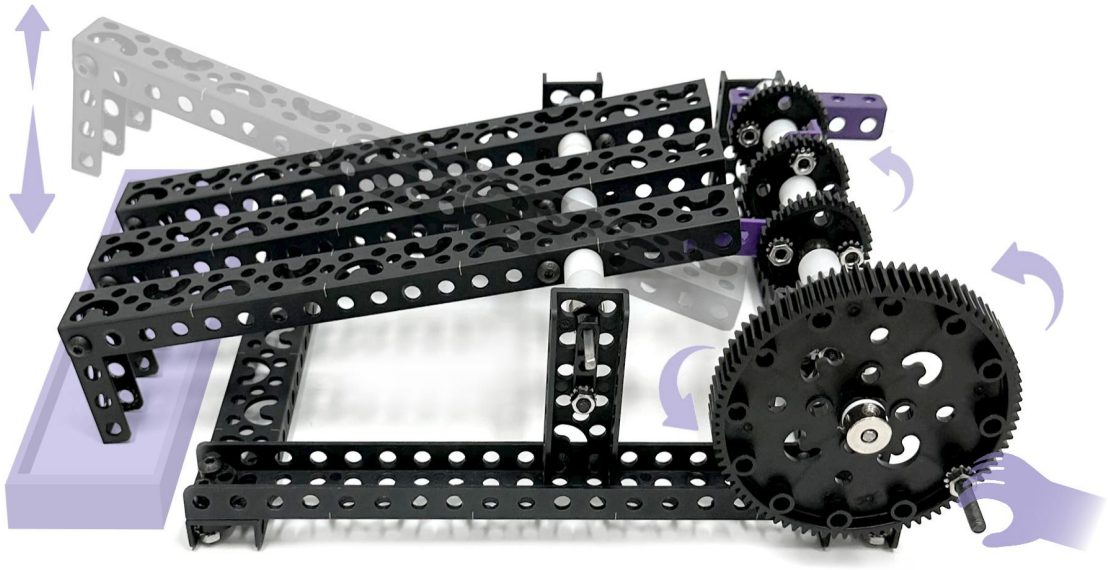
1. 凸轮的运动方式有几种？分别是什么？

2. 凸轮在工程中的应用领域有哪些？

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扩展活动

尝试为舂米机增加手摇的功能







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STEAM 创意课堂

下节课见

