

Science Action Plan

(2023 - 2024)



Vision

At Knights Enham Junior School we provide...

'Inclusive and ambitious learning experiences where our school community feels safe and motivated to achieve their best.'

'Together We Achieve'

That all pupils will leave our school with the desire to explore and discover the world around them confidently so that they have a deeper understanding and knowledge of the world we live in. We aim to nurture children's curiosity through practical experiences that inspire questions and inquiry.

Latest Ofsted Inspection

Summary from Ofsted Inspection (Dec 2018)

Overall effectiveness Good

- | | |
|--|------|
| • Effectiveness of leadership and management | Good |
| • Quality of teaching, learning and assessment | Good |
| • Personal development, behaviour and welfare | Good |
| • Outcomes for pupils | Good |

Ofsted Guidance for What the School should do to Improve Further

- Continue to improve the quality of teaching, learning and assessment to ensure that more pupils make strong progress from their starting points.
- Ensure that all teaching provides robust challenges for pupils, particularly those who have the potential to achieve higher standards in reading, writing and mathematics.
- Ensure that all teaching supports pupils with SEND effectively so that they make stronger progress in reading, writing and mathematics.

Key school Improvements Priorities – linked to School Vision and latest Ofsted report:

1. Teaching and Learning

Improving all pupils' attainment and rates of progress from starting points.

1. To continue to raise the **standards of writing** across the school, aiming to improve progress of all children.
2. To continue to develop **assessment for learning** within the planning process, to allow more opportunity for challenge.
3. To continue embedding **early reading** and **phonics across** the school through the school's culture for rigorous reading interventions.

2. Curriculum

Creating our own curriculum which is rich, creative, and to be proud of.

1. To continue to embed the **school values** within the school curriculum to **support pupil well-being**.
2. To continue developing rich experiences through **cultural capital** by developing **pupil curriculum passports**.
3. To continue to **evolve the school curriculum** by adapting planning and skills based on last year's outcomes.

3. SEND

Meeting the needs of all children to ensure good progress.

1. To continue to develop assessment for learning by identifying gaps for pupils **working below the age-related** expectations.
2. To continue working on **quality first teaching** and **task design** to meet the needs with SEND.
3. To continue to embed the **online systems** to triangulate all the information we record on the progress made by pupils in areas of their learning.

Curriculum intent

In line with the national curriculum for science we aim to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Implementation

Children are taught science weekly through topic based lessons across Upper and Lower KS2.

Working scientifically skills are embedded in the planning to ensure progression of skills and knowledge. Children are given opportunities and encouraged to:

- ask simple questions and recognise that they can be answered in different ways
- observe closely, using simple equipment
- perform simple tests
- identify and classify
- use their observations and ideas to suggest answers to questions
- gather and record data to help answer questions

1. Teaching & Learning Subject knowledge

| Intent | Implementation | Monitoring | Timescale | Budget | Impact |
|---|---|---------------------|--|--------|---|
| <p>To develop consistent planning across the school.</p> <p>To ensure children are engaged in well-planned lessons that facilitate progression and development.</p> <p>To improve the level of high quality science being taught in school.</p> | A new medium term planning template has been created and completed by science lead as a guide for teachers planning their lessons. | KC/SLT | Ongoing | | All of the National curriculum objectives are being covered by the lessons planned. A range of practical work and investigations have been planned in for each topic. |
| | A topic cover sheet outlining key vocabulary and intended outcomes to go at the beginning of each topic. | KC Book scrutiny | Half termly | | Being implemented by all year groups. Check that all are being reviewed at the end of each topic. |
| | Review grids are completed the end of each science topic. | KC Book scrutiny | Half termly | | Topic covers changed to include a review section for the children to complete at the end of the topic. |
| | Science safety audit completed at the start of the year. | KC | Yearly (September 2023) | | |
| To raise the profile of science across the school. | <p>British Science Week. Each class to complete an investigation/ enquiry or practical session on this year's theme of Time!</p> <p>Each class to complete science based activities this week. KC to provide ideas.</p> <p>Explorify (each teacher to join up) to be used to promote thinking and discussion e.g. Odd one out, Zoom in Zoom out activities across the school.</p> | All teachers | Week beginning 8 th March 2024 | | Evidence in books. |
| To continue to develop assessment for learning within the planning process, to allow more opportunity for challenge. | All staff to assess children's substantive knowledge of the content that has been taught and to provide opportunities for the children to complete investigations so that their disciplinary knowledge/ working scientifically skills can be assessed. | KC | Staff meeting (TBC) Additional investigations during science week Upper and Lower school using ideas from subject co-ordinators' course | | Additional investigations carried out by all year groups in science week. More evidence of working scientifically. |

2. Curriculum Planning

| Intent | Implementation | Monitoring | Timescale | Budget | Impact |
|---|---|---|-----------------------------|--------|---|
| <p>To create a broad and balanced science curriculum which fulfils the National Curriculum objectives:</p> <ul style="list-style-type: none"> develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future | Medium term plans, key questions, ideas and resources for each have been completed for each year group and are saved in the Science curriculum folder. | KC | medium term plans completed | | All of the National curriculum objectives are covered in the planning. Teachers are following the lessons as planned and are tweaking the activities/ resources when appropriate for the needs of their children. |
| | Opportunities for the children to be working scientifically are outlined in the Medium-Term Plans | KC | | | More evidence of working scientifically. Continue to monitor. |
| | Resources audited and ordered as needed. | KC | ongoing | | In science cupboard. |
| | Ensure planning covers the National Curriculum objectives for each topic allowing for progression across the key stage. | KC | Half termly | | NC objectives have been added to the curriculum overviews for each term. These are being assessed by class teachers on INSIGHTS to show coverage and attainment. |
| | Children take part in engaging investigations and enquiries which develop their understanding of fair testing. Children to make predictions and be able to reflect on their findings. | Book scrutiny, pupil conferencing KC | Termly | | More evidence of working scientifically. Continue to monitor. |
| | Children to be given opportunities to work scientifically: planning, recording, measuring, drawing conclusions. | Short term planning KC | Termly | | Evidence in books from book scrutiny. |
| | When possible use outside providers/ experiences e.g. the visiting planetarium | | | | Year 5 Winchester Science Centre Planetarium and space themed workshop River study with Watercress and Winterbourne. (Y4) Animal Aid talk (Y5) |

| | | | | | |
|--|--------------------------------------|----|--------|--|---|
| | | | | | Secondary school science sessions? Winton or Harrow way? |
| | Book scrutiny and pupil conferencing | KC | Termly | | Completed by KC Summer 1 |

3. SEN

| Intent | Implementation | Monitoring | Timescale | Budget | Impact |
|--|---|---------------|-----------|--------|-------------------------|
| <p>Meeting the needs of all children to ensure good progress.</p> <p>To ensure that appropriate differentiation is provided for children with SEND to support with progress.</p> <p>To encourage inclusivity through the delivery of the Science Curriculum.</p> | Differentiate tasks as appropriate. | Book scrutiny | On going | | Some evidence – ongoing |
| | Take photographs as evidence to reduce the need for written outcomes. | | On going | | Some evidence – ongoing |
| | Pre-teach key vocabulary – create mind-maps to aid the children’s understanding | | On going | | Some evidence – ongoing |

Subject Leader Impact Statement

Science

2023-24

| How have you used your subject release time? | What has the impact been? | Next Steps: |
|---|--|---|
| <p>10.10.23</p> <p>Primary Core Science Co-ordinator Network meeting</p> | <p>End of Key Stage assessments ideas for science for knowledge of the content and disciplinary knowledge/ working scientifically.</p> | <p>Need to share exemplification examples with staff for assessing children’s work at ARE at the end of each topic.</p> <p>Use the disciplinary/ working scientifically investigations and resources in both Upper and Lower school – possibly during science week?</p> |

| | | |
|------------------------|---|--|
| <p>16.11.23</p> | <p>Updated action plan</p> <p>Checked LTP and MTPs</p> <p>Completed skills progression document.</p> <p>Downloaded Summative assessment booklets from Moodle Plus</p> | <p>Need to upload onto school website</p> <p>Need to share with teachers at a staff meeting</p> |
| <p>22.11.23</p> | <p>Uploaded action plan 23-3 and Skills progression document to school Website.</p> <p>Book scrutiny.</p> <p>All topic learning journey front pages</p> | <p>Remind staff to trim off any reference to Twinkl! NS marking evident in some books.</p> <p>Remind staff to ask children to review the topic at the end and write it on the learning journey cover page.</p> |
| <p>5.3.24</p> | <p>Book scrutiny</p> <p>Checked curriculum coverage</p> <p>Planned activities for science week</p> <p>Summative assessment booklets</p> | <p>Feedback in staff meeting</p> <p>Staff to implement for end of Spring 2 topics</p> |

PLANNER

Use your planner organise your time across the year

What will you check and when?

What will you do as a result of your checks?

| Date | Task (linked to performance management) | Complete |
|-----------|--|------------------|
| September | Agreed action plan linked to SIP Update subject policy Check curriculum overviews both Long Term and Medium Term Audit subject stock Add all upload action plan and policy on school website | ✓ ✓ ✓ ✓ |
| October | Create new subject overview (progress of skills). Upload subject overview on website | ✓ ✓ |
| November | Review all planning. Develop school values and differentiation. Is SEN catered for? | |
| December | Data analysis from data drop | |
| January | Review website and add information/ pictures Undertake drop-in-observations and give feedback | |
| February | Check books/ work sample Give feedback in staff meeting | ✓ |
| March | Review action plan Data analysis from data drop | |
| April | Review all planning. Develop school values and differentiation. Is SEN catered for? | |
| May | Pupil conferencing | |
| June | Analysis pupil outcome data for your subject | |
| July | Review action plan Data analysis from data drop | |

DATA

| Attainment: | | Autumn | Spring | Summer |
|-------------|------|--------|--------|--------|
| Year 3 | GDS | | | |
| | ARE | | | 71% |
| | BARE | | | 26% |
| Year 4 | GDS | | | |
| | ARE | | | 79% |
| | BARE | | | 19% |
| Year 5 | GDS | | | |
| | ARE | | | 70% |
| | BARE | | | 28% |
| Year 6 | GDS | | | |
| | ARE | | | 65% |
| | BARE | | | 35% |

Groups

| % of chn. at ARE | Year 3 | Year 4 | Year 5 | Year 6 |
|-------------------------|---------------|---------------|---------------|---------------|
| Boys | 69 | 73 | 65 | 74 |
| Girls | 73 | 85 | 76 | 59 |
| PP | 66 | 71 | 62 | 63 |
| Non PP | 82 | 88 | 86 | 67 |
| EAL | 78 | 80 | 86 | 75 |
| SEND | 57 | 33 | 13 | 30 |
| Non SEND | 82 | 93 | 96 | 76 |
| | | | | |

Data Analysis:

Points to consider for next year: