

Acoustics.

Describe the nature of sound.

Optics.

State the laws of reflection and refraction.

Explain the formation of images by simple lenses.

Astronomy.

Motion of the Earth round its axis and round the Sun; with applications of these motions to explain the apparent movements of the Sun and Stars, the length of days, and the change of seasons—explanation to Eclipses and the Moon's Phases.

ELEMENTS OF CHEMISTRY.

Properties of matter, aggregation, crystallization, chemical affinity, definite equivalents.

Combustion, flame; nature of ordinary fuel; chief results of combustion—i. e., the bodies produced.

Heat: natural and artificial sources; its effects. Expansion; solids, liquids, gases. Thermometer: conduction, radiation, capacity, change of form; liquifaction; steam.

The atmosphere: its general nature and condition; its component parts. Oxygen and nitrogen: their properties. Water and carbonic acid. Proportions of these substances in the air.

Chlorine and iodine, as compared with oxygen.

Water: its general relation to the atmosphere and earth; its natural states and degree of purity. Sea water, river water, spring water, rain water. Pure water: effects of heat and cold on it; its compound nature; its elements.

Hydrogen: its proportion in water; its chemical and physical properties. Sulphur, phosphorous, and carbon generally.

Nitric Acid, sulphuric acid, carbonic acid, hydrochloric acid: their properties and uses.

Alkalies, earths, oxides generally.

Salts: their nature generally. Sulphates, nitrates, carbonates.

Metals generally—iron, copper, lead, tin, zinc, gold, silver, platinum, mercury.

The chief proximate elements of vegetable and animal bodies; their ultimate composition.

The Committee of Examiners appointed by the Council meets in the Normal School building on the first Monday of January, April, July and October in each year. Candidates are required to send in their names to the Chairman of the Committee one week previous to the day of examination.

VIII. *Miscellaneous.*

1. HAVELOCK.

He sleeps the sleep of glory, and for him
Stern hearts are sad, and manly eyes are dim:
What though the tardy title that they gave,
To grace the warrior, found him in his grave?
The loss was ours, not his; our Havelock needs
No vulgar blazon for his deathless deeds.

No plaudits loud, no faint praise trimly tuned,
Could make or mar the glory he had earned:
The love of England is a nobler prize
Than Senates can decree, or Kings devise;
And England's grief a statelier monument
Than wealth can build, or heraldry invent.

Yes, England loved this warrior, for she felt
That in his soul true English virtue dwelt.
Steadfast, yet ardent, prompt but wary, brave
To height of daring, yet not daring's slave;
Pious as valiant, hopeful 'mid despair;
Dauntless in danger, vehement in prayer:
Alike in peace or war, one path he trod,—
His law was Duty, and his guide was God.

Thro' arduous struggles and with toil severe,
His friendless virtue ploughed its slow career.
He could not match in purse the carpet lords
Of purchased epaulettes, and bauble swords;
Merit, not wealth, when manhood's prime was past,
Raised the born leader to command at last:
And with command came glory. Why recall
What lives and burns within the hearts of all?
We all remember how he rose—a star—
On the thick midnight of that dreadful war,
Roll'd back the tide of ruin, and restored
The poise of Empire with his single sword.

We all remember how through India's plains,
Scorched by fierce suns, or drenched by tropic rains,

O'er streamy swamps by torrid skies o'erarched,
Dauntless and swift, the heroic handful marched.
No need to count their triumphs—none to tell
Of cursed Cawnpore and its hideous well;
Of Lucknow's fate, that trembled on a thread,
Of the fierce carnage, and the glorious dead;
When the close battery's tempest surged and sung,
And through a lane of fire the avengers sprung,
Spent, but victorious—and the glorious shout
For Lucknow's rescue scared the miscreant rout—

Yes, they were saved, but at what deadly cost!
The ransom'd live; but what a ransom's lost!
His brain outwearied and his heart o'erfraught.
The avenger sinks beside the work he wrought,
He lived to save; and having saved, bow'd down
Beneath the burden of his great renown;
Leaving to us the treasure of his fame,
A noble memory, and a stainless name.

—*London Daily News.*

2. I LOVE TO GIVE.

I really believe he did. He would come to me sometimes half a dozen times in a day, the anticipation of successful appeal sparkling in his round eye, and glowing in his little face, and cry out, "Papa, I want a penny, to give to a poor beggar at the door," or "to the musician," or "to the little girl that wanted cold vituals." And then on Sunday mornings there was the call for the money for the Sunday School for the Missionary Society, and for a great variety of good objects. "My son," said I to him one day, "don't you think you give away a great deal of money?" "Why, yes, papa, and I do so love to give." "But then you come to me for all you give away. It is not your own money you are so liberal with."

This seemed a new thought to my little boy, and he turned away to his play, a little perplexed. Presently he came running back.

"Papa, who gives you the money you give away?"

"I earn it by labor, my son."

"But haven't you often told me that God gives us everything?"

"Yes, my son, every good gift we have God gives us."

"Well, papa, are you not glad to give away the money God gives you?"

I hugged the little prattler, gave him a kiss and penny for the next beggar, and sat down to ponder the lesson he had given me.

If our children are so willing to give away the money we give them to any purpose we may designate, should we be less cheerful or ready to appropriate the benefactions of our Heavenly Father to those purposes specified by his word or providence? "What have we that we have not received?" And does He not as truly give to us, for the very purpose of transmitting his bestowments, as we give to our children? We should deem it a very unlovely spirit in them, if they should desire to hoard up the little sums we gave them specially for benevolent purposes, and to educate their benevolent emotions, or to seek to appropriate it to their selfish gratifications. And is it not equally graceless and selfish in us to seek to turn out of the channels of benevolence those sums which God gives us, that as his stewards we may expend it according to his direction? It is not of our own that we are called to give. It is all his, all his! What right have we, then, to complain that the calls are too numerous? They never can be too numerous while he supplies the treasury. And when He does not, our responsibility ceases. So long as the calls are not more frequent than the gifts, what right have we to murmur or decline?

Remembering ever, then, that God intrusts to us something every day, that as stewards of Him we may transmit it to others, let us, in the spirit of children, say and feel—"I do so LOVE TO GIVE!"—*British Mothers' Journal.*

3. THE BOYS.

The correspondent of the *Independent* furnishes an interesting article on boys and their peculiarities. He says:—"The restless activity of boys is their necessity. To restrain is to thwart nature. We need to provide for it. Not to attempt to find amusement for them, but to give them opportunity to amuse themselves. It is astonishing to see how little it requires to satisfy a boy-nature. First in the list. I put strings. What grown up people find in a thousand forms of business and society, a boy secures in a string! He ties up the door for the exquisite pleasure of untieing it again. He harnesses chairs, ties up his own fingers, halts his neck, coaxes a lesser urchin to become his horse, and drives a stage—which with boys, is the top of human attainment. Strings are wanted for snares, for bows and arrows, for whips, for cats' cradles, for fishing, and a hundred things more than we can recollect. A knife is more exciting than a string but does not last so long, and is not so various. After a short time it is lost, or broken, or